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ABSTRACT

In 1966 a decision was made to begin operating the University of California at Berkeley on a year-round basis. Included in this report are discussions of year-round education in general; various methods of year-round education, including the semester summer session plan, the quarter plan, and the trimester plan; and background, implementation, and evaluation of the quarter system at Berkeley. Appendixes include materials dealing with curriculum revision, course listings, summer quarter enrollment, and student reactions. (LLR)

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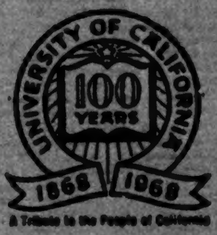
YEAR-ROUND OPERATION AT BERKELEY

Background and Implementation

University of California, Berkeley



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UNIVERSITY OF CALIFORNIA

BERKELEY

YEAR-ROUND OPERATION AT BERKELEY

BACKGROUND AND IMPLEMENTATION

Sidney Suslow

Michael J. Riley

OFFICE OF INSTITUTIONAL RESEARCH

October, 1968

PREFACE

With some qualifications, one ordinarily assumes that the social importance of an event is directly proportional to the number of reports, articles, monographs and books which result from that event. Few events in higher education can match in intensity and quantity the written records, discussions and evaluations of the free speech movement and subsequent student movements at Berkeley and elsewhere. Judged by this criterion, the modest report which follows places the event of the University's recent conversion from a semester system to a quarter system at the very low end of a scale of social importance.

When viewed from a different perspective, however, the national trend toward year-round operation among institutions of higher education has social implications not measured by transitory popular interest.

Among the social changes which can be anticipated, if propagation of year-round operation to all levels of education occurs, is a radical change in the vacation habits of students and their families. The economic and social impact of a major redistribution of vacation periods among the nation's population could be considerable.

What seemed important to us in producing this report was not to satisfy any suspected wide appeal it might have but, rather, to insure that a systematic and cohesive record be made of the background and implementation of year-round operation at Berkeley before the details were lost over time. Nevertheless, there has been considerable interest in the generation of this document from a wide audience of educators both nationally and internationally. The nature of their requests precludes producing a single document which will satisfy their entire needs. We will entertain individual questions from the readers and answer them to the best of our ability.

Sidney Suslow

CONTENTS

PAGE

I. INTRODUCTION 1

II. YEAR-ROUND EDUCATION 4

III. METHODS OF YEAR-ROUND EDUCATION 10

The Semester-Summer Session Plan 10

The Quarter Plan 13

The Trimester or Three Equal Semester Plan 16

IV. HISTORICAL DISCUSSION OF YEAR-ROUND OPERATION AT BERKELEY 19

V. YEAR-ROUND OPERATION IS IMPLEMENTED 25

Curriculum Revision 29

Space Utilization 37

Student Advising 39

VI. SUMMER QUARTER IMPLEMENTATION 41

VII. EVALUATION OF THE QUARTER SYSTEM OF YEAR-ROUND EDUCATION AT BERKELEY 47

APPENDIX

A. Curriculum Revision 55

B. Summer Quarter Enrollment and Attitude Determination 82

I.

INTRODUCTION

The decision of the University of California to begin year-round operation in 1966 was not a sudden one. "An Academic Plan for the Berkeley Campus," in 1957 recommended that the summer sessions program at Berkeley be expanded and made part of the University's regular operation, budgeted in the regular instructional units. However, expansion to a full third semester was not recommended at that time.

In 1958, a meeting of the Committee on Calendar with representatives of the Committee on Educational Policy recommended joint action on calendars by all segments of the State's system of education to help "meet the student load of the future without the acceleration and other disadvantages of the World War II program." The conference rejected both a full three-term operation and the quarter system and recommended a 2 1/2-semester calendar, with the eight-week summer term fully integrated into the educational and budgetary structures of the University. It was noted that the 2 1/2-semester calendar could serve as a transition step to a full-three-term calendar if that should prove necessary at a later date.

California's Master Plan for Higher Education, adopted in 1960, called for State support for summer programs and a study of possible academic calendars for year-round use of the University.

The decision to place the University of California on year-round operation was a logical response to the phenomenal enrollment demands of the present decade and the years ahead.

According to the U. S. Bureau of the Census, the college-age population of the United States will increase by nearly 65% between 1960 and 1975. The proportion of this age group seeking a college education is steadily rising, given the encouragement, financial and otherwise, of a society which places a rising value on higher education and professional training.

"In higher education, as in so many other facets of modern life, national trends are accentuated in California. Enrollment projections originally considered almost extravagant have been consistently revised upwards. Six years ago the University's projected enrollment for 1975 was 118,750 students; now the projected 1975 figure is 146,000. The projected University enrollment for 2000 A.D. has been revised in six years from 214,000 up to 274,000, "said Angus E. Taylor, Office of the Vice President of Academic Affairs, in a progress report to the Chancellor in 1966.

"Faced with such tremendous enrollment demands, the University of California has had three alternative courses of action:

1. To turn away highly qualified students.
2. To build new campuses to accommodate them.
3. To educate more students on existing campuses.

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"The first alternative has never been seriously considered; it is, in fact, no real alternative for California or for the nation as a whole," said Taylor.

The second alternative has been pursued with all the financial and academic resources available to the University. Three new campuses -- San Diego, Irvine, and Santa Cruz -- have recently begun instruction. The University's Revised Growth Plan, approved in principle by The Regents in February, 1966, proposed establishment of two more major campuses by 1975 and the study of three other possible campuses.

These, of course, are necessarily long-range solutions requiring very considerable financial outlays. Hence, the University has turned also to the third alternative: to educate more students on existing campuses, through the adoption of year-round operation. The Revised Growh Plan states:

"The decision to go on year-round operation was made to accommodate a greater number of students and make more economical use of University facilities. To implement year-round operation the quarter system was adopted after much debate. At a level of 40 per cent as many students in the summer quarter as in the regular year, this development adds to the year-round capacity of the University by about 13 per cent -- or the equivalent by the year 2000 of a campus the size of Berkeley or UCLA."

II.

YEAR-ROUND EDUCATION

While many of those institutions offering truncated summer terms may say they are operating on a year-round basis, more precisely the term "year-round education" has come to signify an academic calendar approaching either three terms per year or four quarters per year. Under such a system a university operates comprehensively on a year-round schedule, utilizing its physical plant and administration fully, or nearly so, in each of the terms. Unlike the conventional summer session, which "evolved" from teacher institutes, the additional third term or fourth quarter running through the summer months would be completely integrated into the regular academic pattern. Presumably it is a regular term, and in context and clientele does not differ markedly from the traditional fall and spring terms.

While some proponents of year-round education emphasize the fact that students would be able to graduate in three rather than four years, a majority of proponents argue that expansion of the use of facilities is the most important aspect of year-round operation. Year-round use of facilities increases the total number of students "flowing" through the University in a given year. This saves much of the capital expenditure that would otherwise be needed to expand the facilities to handle this additional group. To legislators, whose responsibilities include their extensive state systems of higher education, with the anticipated increases in student enrollments and the necessary consequence of increased costs, the availability of some form of year-round education provides a ready answer.

On the other hand, university administrators and faculties, mindful of pressures other than fiscal, regard year-round education from a number of viewpoints. Accordingly, academic opinion is diversified. "The administrator has been the prime mover in making decisions for year-round operation. While the faculty is included at some point in the planning, their lack of perspective on the total situation, their limited concern for special disciplines, and their emotional involvement usually mean that the impetus for radical calendar change is given by executive decision."[1] Most educators in fact, deplore the concept of any student attending for three years without a break. Hence, year-round education, varied mechanically in itself, is as much a target as a topic." While year-round education may be an inevitable part of the future for most colleges and universities, the present period is one of transition and experimentation."[2]

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[1] *The University Calendar*, American Association of Collegiate Registrars and Admissions Officers, 1961, p. 14.

[2] Tickton, Sidney G., *The Year-Round Campus Catches On*, The Fund for the Advancement of Education, New York, 1963, p. 6.

Experience with year-round education has varied from school to school sometimes with dramatic differences. There are approximately 1,780 colleges and universities on the semester system, 55 use the trimester system and 300 utilize the quarter system. Most offer some sort of schooling throughout the year, but few have met the criteria for year-round operation.

"A college is operating year-round when the following conditions usually prevail:

1. A beginning freshman may enter at the start of any term -- whether a segment of a three-term calendar (trimester) or four-quarter calendar.
2. Transfer students may enter at the beginning of any term.
3. As a general rule, both entering and continuing students can enroll in courses which enable them to make a full term's progress toward their desired degree.
4. Almost all students can continue college for any number of consecutive terms in each of which they may make a full term's progress toward their desired degree.
5. Optimum use of physical plant is made for at least 48 weeks annually; such optimum use to include providing space for advising students, registration, instruction and testing.
6. Student enrollment is roughly the same in all terms."[3]

Academic Year and Summer Program Delineation

Except for a short period of years during World War II, when many universities utilized a three-term plan, the traditional university academic year has been the nine-month period between the end of the first or second week in September to the end of the first week in June. This "academic year" has been divided by almost four-fifths of the American universities into two 17-week semesters, and by about one-fifth into three 11-week quarters. The trimester schools, of which there are relatively few, make up the difference.

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[3] "A Comparison of Trimester and Four Quarter Calendars for Year-Round Operation of Public Higher Education in California," A Staff Report Prepared for The Coordinating Council for Higher Education, November 26, 1963.

In addition to the so-called "academic year" of nine months, all large universities have operated summer programs varying in scope from enrollments of a few hundred to many thousand, with flexible enrollment plans having principle terms varying from six to twelve weeks and concurrent or consecutive secondary terms of from two up to eight weeks.

Basic to the analysis of differences between traditional school years and year-round operation is the difference between summer sessions of the traditional school year and of year-round operation. Traditional summer sessions have often been different from the other nine months' operation in philosophy, objectives and types of students served.

The typical large university summer instructional program existing today, evolved in a series of steps from week-long teachers' institutes, to summer normal schools, to college and university programs for teachers and, in the last decade of the 19th century, to summer instruction for college students. Along with the demand for summer training for teachers and for accelerated or supplementary summer studies for regular students came the needs of non-teaching adults. Teachers, regular college students and other qualified adults with professional or personal interest in the continuation of their formal education have constituted the three major groups served in summer programs.

During the past decade, however, the summer enrollment in education courses has decreased while summer enrollment growth, as reflected both in numbers and in percentages, has been in fields other than education. Typically, large universities now have substantial summer programs and enrollments in nearly all phases of study.[4]

"It may be stated that present objectives of a majority of university summer programs are: 1) to provide academically sound instruction at all levels, primarily for large numbers of the institutions' own students, secondarily for students from other institutions taking work for transfer, and thirdly to provide opportunity not available in fall, winter or spring, for qualified adults, including many teachers, to improve themselves through formal academic courses for credit on a non-degree basis; and 2) to make available a wide variety of continuation education services through non-credit workshops, conferences and institutes."[5]

A committee at the University of Minnesota found that significant differences in status, objectives, composition of student body, length of term and in salaries and fringe benefits between the academic year and summer have existed in the past in American universities.[6] It was also found that universities have become increasingly aware of these differences and that systematic plans have been put into effect during the past decade which have minimized and in many institutions have eliminated nearly all differences except term length and enrollment. These two differences remain in most universities and constitute the principle focal points for further efforts toward implementation of year-round instructional programs.

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[4] Stecklein, John E., Concoran, Mary, and Ziebarth, E. W., *The Summer Session: Its Role in The University of Minnesota Program*, Bureau of Institutional Research, Report Series Number 1, University of Minnesota, Minneapolis, 1958.

[5] *Year-Around Operation in American Universities*, A Committee Report to The Association of University Summer Session Deans and Directors, Boulder, Colorado, August, 1963, p. 11.

[6] Stecklein, John E., Corcoran, Mary, and Ziebarth, E. W., Op. Cit.

Thus, with the equalization of summer session term length and enrollment, the conversion to year-round operation becomes basically a matter of choosing the educational "system" appropriate to the university's goals.

III.

METHODS OF YEAR-ROUND OPERATION

The Semester - Summer Session Plan

The typical American college and university semester is 17 weeks, exclusive of orientation, advising, registration and commencement. The semester-summer session year normally consists of two such semesters with a summer session of from 8 to 12 weeks. The summer session is sometimes split and often supplemented by a concurrent mid-summer term of 6 or 8 weeks. These accommodate special programs and non-credit workshops.

Classes for the fall semester normally begin the third week of September and continue through January; the spring semester runs from February through the first week in June with the 8 to 12 week summer sessions beginning about mid-June and ending at various times up to the end of August.

The major vacations, other than one-day holidays, break into the semesters with the Christmas vacation in late December through the first few days of January, leaving a detached period of two weeks or more in January, and spring vacation taking typically one week in March or April. Final examinations are usually given during the last 6 or 10 days of the semester. Credits are computed on the semester basis with the typical semester class hour of 50 minutes. However, in many summer terms the class hour may be extended to a 75 or 90-minute period to provide the same ratio of class time to credits as in "the year."

Summer programs in institutions under the semester plan are, with very few exceptions, administered under a separate dean or director. At the University of Illinois, for example, an associate provost administers the summer program along with other duties.

Those universities now on the semester-summer session plan having large enrollments and providing well-developed, comprehensive summer instructional programs of 9 or more weeks duration are often said to be operating on a year-round basis.

Advantages of the Semester-Summer Session Plan

Among the purported main advantages of the semester system, which faculties are very reluctant to reduce or lose, is the 17-week length of prime attendance time, allowing for larger doses of instruction, more student time for independent study, reading, writing, deliberation and maturation. Also, the semester beginnings and endings coincide closely with those of a majority of other schools, colleges and universities; providing easy entry and reentry, and matching the school and college attendance and vacation habits of a great majority of the American people.

The semester plan provides a full 9 months of prime attendance time with maximum enrollment potentiality and probability without new and artificial pressures under the present attendance and vacation patterns of the population. The use of the summer session enables those desirous of attending school year round to do so for reasons of acceleration, deficiency correction or other reasons.

Disadvantages of the Semester-Summer Session Plan

Principle disadvantages occur in the lack of vacation and term flexibility present in other plans, the presence of the detached "lame duck" period after Christmas and the inability to divide the total year into equal parts, resulting in summer terms of shorter lengths. These summer terms have come to be, through many years of operation under specialized conditions, different in status, types of program, clientele, faculty salary, and perhaps, program depth and quality. Because of the shorter length of the third, or summer term, (8-12 weeks rather than the semester's 17 weeks) work ordinarily expected of a student in a semester must be compressed. This raises the question of equivalence of material and teaching responsibility between the semester and the summer session and also poses problems of faculty salary and leave administration.

The Quarter Plan

Typically the quarter plan as currently applied in universities consists of a 9-month academic year divided into three 11-week terms -- exclusive of orientation, advising, registration and commencement. Added to this is a summer quarter which may be divided into two 5 1/2-week sessions or run as an 11-week unit.

The academic year quarters are scheduled in such a manner as to provide an unbroken 11-week period for classes except for Thanksgiving holidays and national or special school holidays. Fall quarter classes normally begin with the third or fourth week of September and sometimes as late as the first week of October, ending in the second or third week of December. Two, and in some instances, three-week Christmas holiday vacations are possible. The winter quarter begins in early January and typically ends in the middle of March. A week intervening between the winter and spring quarters serves as the traditional spring break. The spring quarter thus begins in the early or middle of April and ends in early or middle June.

The summer quarter or session is usually administered under a separate dean or director, but in some of the recent conversions has been brought under the school and college deans. The University of Washington recently promoted the summer quarter director to vice-provost where he administers the summer quarter along with other duties.

Normally under the quarter system the student takes fewer courses in any given term than under the semester system. But, because there is an additional term in the academic year (aside from the summer) the courses taken total to the same number. The student thus concentrates his efforts on fewer courses per term and is expected to achieve the same educational benefit from each course under the shorter quarter term as under a semester system.

Advantages of the Quarter System

The fact that the year is broken up into smaller segments gives the quarter system its chief advantage -- flexibility of term and vacation time for both students and faculty. The shorter segments also enable the student to experiment with course selection without fear of "wasting" half the school year on a bad choice. This flexibility thus gives wider options in course selection and in the changing of sequences as well as adjusting major-minor patterns.

No quarter is interrupted for more than national or local holidays -- the post-Christmas "lame duck" period is eliminated. The term beginnings and endings coincide closely with those of other colleges and schools, providing ease of entry and reentry, and are also not in conflict with established attendance and vacation habits of the American people. The quarter plan provides for more concentrated study in fewer subjects and the three or four terms can be of equal length. This avoids re-structuring courses for the summer term. A summer session or short quarter in the summer may be expanded to a full fourth quarter when needed, making expansion to full-scale, year-round operation comparatively easy.

Disadvantages of the Quarter System

The main disadvantage of the quarter system is that the quarter, with its 10-week instructional term is often considered too short as a basic time unit. This has been particularly true in the sciences, where the smaller instructional units do not provide as much time for deliberation, reading, writing, laboratory work, seminars, student maturation and time for the increasing reliance now placed on independent study.

Because of their increased frequency, more time is required during the year in registration and in final examinations. Faculty time for teaching, examining, grading, etc., is shorter when considered on a single course or quarter basis; however, it is the same for both students and faculty when considered on an academic year basis.

The Trimester or Three Equal Semester Plan

Typically, a trimester is 15 weeks in length, exclusive of orientation, advising, registration and commencement. This compares with the typical 17-week semester or the 11-week quarter. Under the trimester plan three 15-week terms constitute the academic year. A separate short summer session may run concurrently to the third trimester to facilitate teacher education and non-credit workshops.

The first trimester period begins in August and ends before Christmas, the second extends from New Year's to mid-April, and the third extends from the end of April to early August. Approximately four weeks remain in August for vacations and housekeeping. The vacation periods, except for Thanksgiving and national or special local holidays are scheduled outside the term, thus providing an uninterrupted 15-week period for class purposes.

Class credit hours are computed in semester hours with the same number of clock hours of class work per credit hour as required by institutions on the semester plan. However, it should be noted that, as compared to the traditional semester plan, there are two weeks less per term and four weeks less time in the two terms of prime attendance. The normal student load is considered to be 15 semester hours per term, making it possible for a student to complete a baccalaureate degree program in eight trimesters.

Advantages of the Trimester Plan

Principle advantages of the trimester plan are that a major portion of the academic values of the semester (time necessary for quality education, etc.) are present in all three principle terms, as are most of the flexibility qualities of term-length vacation and leave possibilities for faculty, and course selection and change of major options by students. It is claimed by some that a full semester's work can be done by both students and faculty in the 15-week trimester, and thus the possibilities for acceleration are increased.

It also has the advantage of equal-length terms, and this assists toward equalizing status and character of offerings, and reduces the administration problems attendant to faculty leave plans and pay.

Disadvantages of the Trimester Plan

Chief disadvantage of the trimester system is its lack of articulation with other educational systems. By ending in mid or late April the trimester system makes it difficult for high school June graduates and transfers from other colleges to enroll for the summer term, thus eliminating much of the "market" for that term and cutting down the efficiency of the term. The continuing student who chooses not to attend the summer trimester is faced with a four-month interval in his education rather than the three-month interval of the other plans.

It has been said that a faculty member, having offered his present two-semester courses in eight months, would be able to earn 50 per cent more salary for the third term. Many faculty members have felt that forces from outside the University would cast a suspicious eye toward an equal pay status for the eight-month trimester as compared with the nine-month semester system. The aspect of a 50 per cent pay increase for teachers, it is also believed, would cause pressure for additional teaching without completely proportionate pay increases.

The problem of articulation of the three terms with other university calendars makes it very difficult to recruit visiting faculty for the summer. This problem would be relieved, for one of the parts, if the summer term were split into two parts. The other part would have to be handled almost exclusively by regular faculty members, perhaps at compensating salary for the shortened academic year.

IV.

HISTORICAL DISCUSSION OF YEAR-ROUND OPERATION AT BERKELEY

Historical discussion of year-round operation at the Berkeley campus has been recorded as far back as June, 1957, when "An Academic Plan for the Berkeley Campus" recommended that the summer sessions program at Berkeley be expanded and made part of the University's regular operation, budgeted in the regular instructional units. Expansion to a full third term was not recommended, however.

In March of 1959, a meeting of the Committee on Calendar met with representatives of the Committee on Educational Policy. The academic administration recommended joint action on calendars by all segments of the State's system of education to help "meet the student load of the future without the acceleration and other disadvantages of the World War II program." The conference rejected both a full three-term operation and the quarter system, and recommended a 2 1/2-semester calendar, with the eight-week summer term fully integrated into the educational and budgetary structures of the University. It was noted that the 2 1/2-semester calendar could serve as a transition step to a full three-term calendar if that should prove necessary at a later date.

"The Master Plan for Higher Education in California," in February, 1960, recommended that every public institution of higher education offer academic programs in the summer months; that State support be provided for such programs in the University and the State Colleges; and that the Coordinating Council make a study of three-semester and four-quarter calendars for year-round use and recommend a calendar for higher education in California.

The University-wide Academic Plan, approved in 1961, declared the University's intention to continue to accommodate all properly qualified applicants, and stated that the University's capacity will be increased to the necessary extent in the following ways: 1) by expanding existing campuses; 2) by establishing new campuses; 3) by improving utilization of existing facilities. The Academic Plan stated, further, that this increase in capacity would be "planned and timed to preserve, and if possible to increase, academic quality."[7]

Additionally, the Academic Senate Committee on Education Policy had, in the past, urged that summer instruction be expanded, though not at the cost of disrupting the regular academic program.

These various recommendations reflected the prospect of the University's great growth forecast in its student population. To accommodate this growth, the University was expanding its existing campuses and developing academic and physical plans for three new campuses.

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[7] "University Bulletin", University of California, Berkeley, January 3, 1963.

The University faced the early prospect of diverting students from the large campuses as they reached their enrollment capacities to other campuses where capacity still existed. The University "must also, in good conscience, respond to the challenge of numbers by offering reasonable year-round use of its facilities. If we do not, we cannot go before the voters of the State to ask for additional bond issues to finance University expansion without seriously impairing public confidence in the University."[8]

Prompted by these and other considerations, the University Administration began a study of year-round operation in late 1960. After discussion by the President's Cabinet and the President's Council of Chief Campus Officers and by the Academic Senate Committee on Education Policy, a plan was submitted to the Regents at their meeting in February, 1961.

This earlier plan called for a "third term" of 12 weeks or two consecutive terms of six weeks each, to be offered in the summer of 1962 or 1963 on the Berkeley and Los Angeles campuses for regularly matriculated students. It proposed that budgetary support and student fees be on a basis comparable with that of regular terms. After discussion, the Regents adopted a resolution which approved in principle use of a three-term calendar "beginning at the earliest practicable time on all campuses where feasible," and asked that the Berkeley, Los Angeles, and Santa Barbara campuses prepare addenda to their 1962-63 budget requests to finance three-term operation on a regular basis.

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8 "University Bulletin," Op. Cit.

In the following months serious planning efforts went forward on the three campuses initially involved to estimate the size of the problem in fiscal and educational terms. Meanwhile, the Governor approved and the legislature appropriated in the 1962-63 budget the sum of $600,000 to begin year-round operation in the summer of 1963, and assurance was given that $3 million would be appropriated for the same purpose in the 1963-64 budget.

Later in the year, a staff memorandum on Year-Round Use of University Facilities reviewed year-round calendars then in effect and recommended a 16-16-12 "hybrid" plan for the University. This plan was discussed by the President's Cabinet, the Combined Committee on Educational Policy, the Council of Chief Campus Officers, and the Regents' Committee on Educational Policy.

In January, 1961, the honor student California Club discussed year-round operation of the University at its convention at Riverside. The students preferred the 16-16-12 plan, put the three-term plan second and the quarter plan last. The Combined Committee on Educational Policy of the Academic Senate proposed that the summer term be divided into two six-week sessions (for the Berkeley campus) and that the Los Angeles campus be allowed to experiment with a 16-16-8 calendar.

The suggestions of the Senate Committee on Educational Policy were discussed by the Council of Chief Campus Officers and a 16-16-6-6 calendar was agreed upon, at least on an experimental basis. The Regents' Committee on Educational Policy also accepted this plan, but with some reluctance and on an interim basis only.

In the course of planning for inauguration of three-term operation on the 16-16-12 (or 16-16-6-6) schedule mentioned above, it became increasingly clear to the campuses involved that the 12-week term as proposed would prove less satisfactory than either a third term comparable in length or the adoption of a four-quarter system. It would greatly compress the work ordinarily expected of a student registered for a course with content and depth equivalent to those of the regular semester courses, or alternatively, it would make it necessary to reduce the units per course which in turn would create difficulty in stating and maintaining specific degree requirements. Also, since it was assumed in all planning that a member of thefaculty would teach two terms out of three, a third term of considerably shorter duration would raise serious questions as to equivalence of teaching responsibility among the terms, and consequently would pose problems of salary administration.

The President's Cabinet, in discussing the target date for implementing year-round operations, agreed that it would be desirable to delay the start to 1964-65 and to adopt a full three-term calendar at that time. The three-term calendar decision was based on the results of several student-faculty polls and the reports of several ad hoc committees.

Discussion with the Council of Chief Campus Officers led to agreement that summer term offerings in 1964 should be expanded and that the Regents should recommend to the Coordinating Council that the Council make a comprehensive study of the feasibility and desirability of an articulated year-round calendar of three equal terms applying to all segments of public higher education in California. The Regents approved postponement of year - round operation from 1962 - 63 to the academic year

1964-65, and also establishment of a full three-term calendar.

The University then turned back $600,000 appropriated for the year-round operation in 1962-63 and withdrew its request for $3 million for year-round operation 1963-64.

Thus, at the beginning of 1963, it appeared the University would be on the path to three-term, year-round operation -- the third term being a natural outgrowth of the summer session.

V.

YEAR-ROUND OPERATION IS IMPLEMENTED

Several factors in late 1963 entered the apparently clear-cut decision to implement three-term, year-round operation at the University of California.

Two notable setbacks in the operation of the trimester system of year-round education came to light in 1963.[9] One of these occurred in Florida. In 1959 the Florida State Legislature asked that the state universities be brought under the trimester system of year-round operation. By 1963 dissatisfaction with this system among students and faculty was becoming apparent. (In 1967, it was decided by the universities and agreed to by the governor to abandon the trimester system and switch to the quarter system) The main cause stated for the change was the major complaint of the students and faculty that a 16-week semester course could not be crammed into the 15 academic weeks of the trimester without shortchanging educational content. A side issue was the fact that, while the professors received an 11% pay increase at the time of implementation of the trimester, their workload has been said to have increased 25%. Other complaints centered on the fact that the Florida universities were "out of step" with universities in other states with respect to starting dates.

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[9] "The Long Road to Academic Excellence," *Science Magazine*, February 4 & 18, 1966.

The University of Pittsburgh had adopted the trimester system in 1959. The trimester was designed "to produce a good deal more education from the same financial overhead." In 1960 President Litchfield claimed that, in the previous year the third term trimester had "produced $400,000 in excess of our expenditures for instruction." But the third trimester, though staffed for a large student load, never filled up, and, ironically, a Ford study concluded that the trimester was responsible for "a major share of the cost increases that led the University to a cash deficit of $19.5 million."

Added to these factors was the fact that, after repeated polls and surveys, no clearcut mandate for the trimester system could be found. Also in 1963, a University of California faculty committee issued a report to the Regents stating:

"The advantages, which seem to us decisive, are that with the adoption of a four-term plan, we do not see any problems of faculty compensation, sabbatical leave and other privileges, faculty recruitment and articulation with other school schedules, distribution of faculty activities among teaching, research, and other service, or of student programs and educational accomplishment."

"Other favorable factors are the certainty that a quality operation can be conducted under a quarter system as demonstrated by schools like Chicago, Stanford and the California Institute of Technology, and the predominance of the quarter system among Pacific Coast universities. Finally, the four-term plan is the most suitable if some campuses should have year-round operation and some not, but all campuses are required to operate on the same calendar as we have reason to believe will happen. We are convinced that ... the four-term calendar best protects the long-term position of the faculty."

Other factors of the University community illustrated the feeling that reigned at the time. "The critical decision to go to year-round operation was approved in principle by the Regents on February 17, 1961, before there had been any significant faculty consultation or discussion; thus the only issue debated at length was the choice between a quarter system or some variant of the trimester system. On this issue so many different committees were asked to comment and so many votes, usually not on comparable questions, were taken that the result was a mass of conflicting evidence from which almost any opinion could be supported."[10]

The flavor of the above-mentioned consultation is perhaps best illustrated by a letter in June, 1963, from the Chancellor at Santa Barbara to President Kerr in support of the quarter system. The letter ends by noting that the Chancellor had talked with various of the officers of the Academic Senate's Santa Barbara Division, and adds:

"None agrees with me (about the quarter system), although all seem now to be a little tired of all the talk and probably would go along without much fuss."[11]

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[10] "University Bulletin," Op. Cit.

Thus, the decision to delay the beginning of year-round operation had effectively reopened discussion of the method of instruction. As Clark Kerr stated in a speech before the Regents: "This discussion (of year-round operation) has not resulted in any clear consensus. The faculty votes have been divided as between a three-term and a quarter plan, with slight over-all preference for the former. Student votes also have been divided, with a slight over-all preference for the latter. Apparently faculty members tend to support the status quo, while students prefer change. The Senate Committee on Budget and Interdivisional Relations favors the quarter system; the Senate Committee on Educational Policy favors three terms. The votes and the committee reports are set forth in a separate document. As the Regents will note, both committees really recommend a four-term approach, whether of the 1/4-1/4-1/4-1/4 variety or the 1/3-1/3-1/6-1/6 type."

"My own view is that either the three-term or the quarter arrangement is workable, and I only wish that a clear consensus for one plan or the other had emerged. If it had, I would recommend the clear consensus view without hesitation," Kerr said. He concluded by stating: "... the choice of a quarter or three-term system is not a decisive factor in the eminence of a university."

With the above statements, it was then decided to begin year-round operation under the quarter system in September, 1966.

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[11] "University Bulletin," Op. Cit.

Curriculum Revision

One of the first problems faced was that of curriculum revision. Departments would have to re-structure course offerings from a two semester academic year to a three quarter year. Prototype catalogs with the revised curricula would have to be distributed to high school advisors, junior college transferees, and others wishing to enter the University in the Fall of 1966.

Enrollment projections would have to be made so staffing requirements could be met and faculty workload and sabbatical terms also needed to be resolved.

The question of course offering, staffing, and enrollments for the first summer quarter in 1967 also needed to be resolved.

A Committee on Year-Round Operation was created to coordinate administrative budgetary, space planning, faculty and educational objecties. This committee was composed of representatives from the faculty, including members of Academic Senate committees such as the Committee on Courses, Committee on Admissions and Enrollments,and members of the Chancellor's Office and the Office of Institutional Research. The Committee was responsible for all phases of guidance, coordination, and review of each step in the conversion to the quarter system.

Pursuant to these conditions a set of "Guide Lines for Year Round Operation" was circulated to insure common understanding of the changes and projections necessary to the change-over.

The general planning time table was:

January, 1965 --	Preliminary Departmental recommendations showing course descriptions, quarter credits per course, hours of lecture and laboratory meetings per week, and courses to be offered in each of the four quarters.

February, 1965 -- Prototype catalog issued to all departments for further review and for inter-departmental coordination.

June, 1965 -- Final departmental recommendations on quarter courses submitted to Committee on Courses for approval. Final revisions of Catalog - Bulletin materials submitted.

December,1965 -- Copy to University Press for all catalogs bulletins.

May, 1966 -- Bulletins and Catalogs available for distribution.

September, 1966 -- Start of Quarter System.

The Committee on Year-Round Operation was appointed in early November, 1963. After a series of meetings in November and December of that year, the Committee concluded that a transition to a new calendar should provide the opportunity for a reexamination of educational philosophy with students' needs foremost. In this context it was felt planning should be accompanied by a critical review of curriculum with regard to content, emphasis, course patterns and other educational factors.

With this emphasis in mind the Committee prepared a letter to all Deans on the Berkeley Campus asking for their consideration and consultation with their faculty. To assist in developing some general guidelines for the curricula under a quarter system, expressions of preferences were requested on:

a) Definitions of a full study load for students under a quarter system,

b) The desirability of continuing the unit system then employed or conversion to a course system divorced from units, under which each course would have equal weight,

c) The most desirable relationship of class meetings to outside study time -- a standard of 2 hours of study for each class hour had achieved some acceptance in the past.

The questionnaire was received by the various departments and analyzed along much the same lines used by one University Department. In its reply the Department said: "... the faculty has developed alternative curriculum proposals utilizing a three course, a four course, and a five course program. It has examined the problems posed by each of these alternatives in respect to such matters as logical unity of materials included in single courses, ease of securing proper sequence of courses,permissible breadth of course included in a curriculum, space and staffing needs, and relationships of our curriculum needs to course offerings in other departments. The faculty has also considered at length the potential impacts of the three alternative patterns on various considerations related to quality of instruction."

As each of the departments returned its questionnaire, the members of the Committee on Year-Round Operation analyzed each reply to determine if a thread of consistency had evolved. The Committee then issued a set of Guidelines for Year-Round Operation.

The replies had indicated that there was no consensus on a preference for a course or unit system and the continuation of a unit system appeared to be most consistent with other universities. There was strong support for a reduction in the student course load to three or four courses per quarter; with some exceptions. There was also some favorable response to the suggestion that class meetings be divorced from units of credit.

The matter of using the course or unit system of credit never did meet with University-wide agreement. Berkeley chose the unit system, as did the Davis, Santa Barbara and Riverside campuses, while UCLA, Santa Cruz, Irvine and San Diego chose to operate under the course system. Thus, there is evident a University-wide flexibility rather than the strict application of one type of credit system.

Under the semester system, the nominal student's work load, for planning purposes, was considered to be 15 semester units -- equivalent to 45 hours per week total student work load, which included class meetings and independent study (i.e. library, home, etc.). On this basis a three unit semester course was equivalent to 1/5 of a student's work load, or a five unit semester course was the equivalent of 1/3 of a student's work load.

The unit under the semester system or the credit under the quarter system was based upon three hours total time per week required of the student. Thus, due to the different lengths of the quarter and the semester, one semester-unit would be the equivalent of 1-1/2 quarter-credits. For example, a three unit semester course given completely in one quarter would be valued at 4-1/2 quarter-credits. A total program for a degree at Berkeley consisting of 120 semester-units would have 180 quarter-credits upon conversion.

While semester offerings showed a fairly wide range in unit values, by far the dominant value was three units, and the corresponding typical student load per semester was five courses. With division of the academic year into shorter periods, there was fairly general agreement that the course load per quarter should be reduced -- perhaps to three or four courses in the lower division and the upper division. This meant that, while some range in credits per course were to be expected, the dominant quarter patterns should be in the four and five credit range, with relatively few courses listed at only three quarter credits.

Conversion to quarter courses was often relatively simple: the change from a three-unit semester course to an almost identical four or five-unit quarter course, or perhaps the conversion of a two-semester sequence (e.g. course number 100 a-b) into an identical content coverage in a three quarter sequence (e.g. course number 100 a-b-c). In some cases, however, substantial reordering of course content was involved.

This reordering occurred when the expansion of the total coverage of the course -- as in converting from a three-unit semester course to two three-credit quarter courses -- became an expansion in course credits and, in effect, a proliferation of courses.

Thus, when the Committee on Year-Round Operation reviewed course offerings and considered consolidation or expansion of courses from a semester to a quarter basis, Guideline I was suggested:

> For any department, the total quarter-credits for three quarters of courses described in the general catalog and scheduled, should not exceed present semester-unit offerings for two semesters by more than 50%.

It was anticipated that careful review of offerings by departments would, in many cases, result in consolidations and eliminations so that, in fact, the average increase per year in quarter course credits would be less than 50% of semester course units.

Other suggested Guidelines helped department heads to analyze their course offerings within a uniform framework:

Guideline II -- For any department, the number of "classes"* offered in the three regular quarters should not exceed 1.5 times the number offered in two regular semesters, and the increase for the summer quarter should be not more than proportional to the added student work load.

* Independent sections of a single course are counted as separate classes.

Guideline III -- For any department, average size of summer quarter classes should be approximately equal to the departmental **average** for regular quarters.

Guideline IV -- Any single-semester course given as a single section and with relatively low registrations (25-30 students) should be offered only in one quarter of the year. Such courses would not normally be available during the summer quarter unless justified by an essential role in an educational sequence.

Guideline V -- Any two-semester sequence with relatively low registrations should be offered only once under the quarter plan, and probably should not extend into the summer quarter.

Guideline IV -- Coursesnow offered in each semester probably should be offered in two quarters if registrations are relatively low, in three quarters if registrations are high, and in four quarters if multiple sections are presently offered.

Following the above Guidelines, departments were urged to utilize available time for major reviews and appropriate revisions of subject offerings, course content, and degree requirements. In this regard, then President Clark Kerr suggested that "... the change to the quarter system can provide an opportunity for encouraging experimental programs ranging from new patterns for majors to entirely new undergraduate curricula pursued by small groups of students and selected faculty members." Moreover, President Kerr reported that the Regents, as a matter of policy, would look favorably upon requests for support of studies of curricula reform and would grant financial support to curricular studies.

There were two major planning features of year-round operation:

1. Reorganization of two-term curricula and subject offerings to a three-term system.
2. The addition of a fourth, or summer, term of academic operation.

The two were interrelated, but the first needed to be roughed out before detailed attention could be given the second.

To facilitate the reorganization, Department Chairmen were asked to complete forms which indicated every course taught by the department in 1963-64, with reported enrollments and estimated enrollments for the 1966-67 year. (See Appendix A for samples.)

In May, 1965, the revised departmental proposals were referred for formal academic review to the appropriate divisional committees of the Academic Senate. Simultaneously, they were incorporated in a Prototype Catalog for 1966-67 which, after printing, was circulated to campus and University administrative officers. This Prototype Catalog performed the function of informing each department of the resultant changes of each of the other departments. Although many departments cooperated in their initial efforts to insure compatibility of their programs, most departments did not know what others had decided. The Prototype Catalog, therefore, served to give everyone a picture of the tentative plans for number, type, and course content.

The academic departments were then asked to review their programs yet again, giving particular attention to patterns of offerings by quarter and to modes of articulation with the programs of other departments. They were also asked to prepare revised versions of the appropriate general sections of the catalog.

Although numerous educational and administrative details were yet to be worked out, a general catalog setting forth major curriculum changes was completed late in 1965 for use when the quarter system was inaugurated in the fall of 1966. The Faculty Committee on Year-Round Operations, which guided thousands of man-hours of departmental time coordinating curricular revision and planning for the switchover, issued a revised prototype catalog, called the Provisional Catalog, indicating over 2,000 courses that would be offered under the quarter system.

A Course Listing was also compiled at this stage to provide guidance to counsellors who would be advising new students about courses to be offered and advising continuing students on the most efficient means to complete degree requirements under the new system. The Course Listing compared semester courses and pre-requisites with quarter courses and pre-requisites and showed course number changes, if any, between the new quarter and the old semester. A sample of this is shown in Appendix A, with samples of the Prototype and Provisional Catalogs.

The production of the Provisional Catalog was distributed widely within the University and to California high schools, junior colleges and state colleges for use in counselling those students considering attending the University of California. The date for final substantive and editorial revisions of the official campus catalog was set for December, 1965, so that printing and distribution for 1966-67 could proceed on schedule.

Throughout this period the Committee had also been giving its attention to problems of course scheduling and classroom space utilization as an expansion of its continuing program of studies of student numbers, attitudes and enrollment patterns.

Space Utilization

After extensive deliberation by the Committee on Year-Round Operation, the consensus was that there need not be a lock-step arrangement of units and class hours. The criterion spelled out in the Academic Senate Manual on coursescalled only for three hours of effective student time, both classroom and outside study, for each unit of credit. No specific means of carrying this out was named.

A report that added impetus to the movement to break the lock-step between unit value and class hours was issued in 1964, the title: Space Utilization Under a Four-Term Calendar. The report pointed out that there was little, if any, necessary relationship between the unit value of a course and standards of classroom space utilization. Although it had been fairly common for departments to maintain a one-to-one relationship between the semester units of credit assigned to a course and the scheduled weekly contact hours of classroom instruction, the report noted that there was no rule requiring such a ratio.

There was, the report continued, a relationship between the scheduled weekly hours of classroom instruction and standards of space utilization. "A very few schedules are difficult to accommodate and should be avoided unless a department is willing to make certain other sacrifices," the report stated.

The most difficult schedule under the quarter system would be one with four meetings per week. "With most rooms now available for assignment five days per week, the campus is barely able to maintain the average required utilization. If any significant number of classrooms were tied up for four days and thus available only one day, the average would certainly fall below the desired minimum. Departments that find academic advantages in scheduling classes to meet four times per week should be prepared to make one of the following adjustments: 1) for every four such classes scheduled, schedule a fifth class of comparable size to meet four times a week, each day in a different room vacated by one of the other classes, 2) schedule one-fourth of such classes to meet on Saturday mornings rather than another week-day, 3) schedule one-fourth of such classes to meet after 7:00 p.m., or 4) some suitable combination of the first three methods."

"A second schedule that poses some difficulties is that of classes that meet only once a week. For each such class that meets on Tuesday, for example, there ought to be a class of comparable size that meets in the same room at the same hour on Thursday."

"The above are the principle areas in which academic programs and standards of classroom utilization may come in conflict. It should be observed that, so long as the total of weekly classroom hours requested by a department remains more or less constant under the four-term calendar, all of the following schedules are entirely possible from the point of view of classroom utilization: 1) two meetings per week of one, one-and-a-half, or two hours duration, 2) three meetings per week of the same lengths, and 3) five meetings per week of one or one-and-a-half hours," the report concluded.

Student Advising

Student Orientation Service, a student-sponsored program which coordinated activities pertaining to the introduction of new students to the University, utilized 150 student counselors for two purposes: to do research on the changes in various departments and schools as a result of the quarter system, and to give advise about courses, primarily to freshmen and transfer students.

This service was advised by and coordinated with the various campus departments. In a letter from the Office of the Chancellor to all Deans it was noted that students and faculty members "may encounter interim problems arising from the conversion of academic programs to the quarter calendar. It is desirable, therefore, that departmental and major advisors give close attention to curricular problems facing students."

The most important of these problems facing students in the transition period were: the fulfillment of major requirements in the face of extensive revision of these requirements; the satisfaction of breadth requirements; the acceptability of prerequisites for courses, changed as part ofthe extensive curricular revisions. Also, the changes in course content that occurred rendered more difficult the detection of duplicate courses.

To alleviate uncertainties and potential difficulties for students during the transition period, faculty members were urged to consider the preparation of a set of "conversion course and major equivalents" for their departments to be used by advisors with uniformity and clarity. A guiding principle was "that the student not be penalized in his academic progress, consistent with his following a sound academic program." To this end, using the course listing as a guide, advisors had freedom to develop programs with their students which accommodated any transitional adjustments that were necessary, and which provided his students with a feasible graduation plan.

VI.

SUMMER QUARTER IMPLEMENTATION

The decision to begin year-round operation introduced a major question about the Summer Quarter and its relationship to the Summer Session:

> Should the Summer Session, presently on a self-supporting basis and open to almost any interested person, be continued, modified, or dropped?

Admission to the two six-week Summer Sessions was open to students "currently in good standing on any campus of the University of California or at another college or university, to applicants under 21 years of age who are graduates of high school or other secondary schools, and to qualified applicants over 21 years of age. Courses of instruction leading to baccalaureate and advanced degrees are offered," said the 1965-66 University Catalog.

Many of the Summer Session students were teachers taking courses for advanced degrees or to fulfill credential requirements. If the Summer Session were eliminated some provision would need to be made for this necessary function of the University.

It was felt from the beginning that the Summer Quarter should be designed to be identical in course content and objectives to other quarters and should enable regularly matriculated students to maintain normal progress towards a degree. An 11 to 12-week quarter would be unsuitable to teachers desiring shorter periods of supplementary education and accommodated in the past by one of the six-week Summer Sessions. The general public, often desiring a more general treatment of the subjects than students desiring a degree in that subject, would also find the Summer Quarter not to their liking.

The general public, it was felt, could be accommodated through increased emphasis on the University of California Extension facilities which gave courses adapted to those seeking knowledge but not specifically a degree.

The teachers' dilemma centered mainly about the fact that the Summer Quarter, as proposed, would often end in the first week in September. Many California elementary and secondary schools begin their academic year in the week following Labor Day and teachers would need to report in the week preceding the beginning of school. Thus, the end of the Summer Quarter would often overlap the beginning of the teachers' school year.

Several solutions were discussed by the Committee on Year-Round Operation, but two of these seemed to offer more promise than the others:

The teacher could enroll in a regular Summer Quarter class and the professor would give the teachers a final examination two or three weeks before the normal end of the quarter. The examination would concern only the material covered to that date and the teacher would be able to finish the course in time to begin his own academic year -- albeit lacking two weeks' material.

The other possibility was to create a separate, but equal course for teachers only. This would be a shortened version of the regular Summer Quarter course and would cover the same material and might even be taught by the same professor. The advantage to this method would be that the teacher would be able to assimilate the full course material and be finished in time to take up his own work.

In evaluating the Summer Session problems and solutions the Committee reviewed enrollment patterns in previous Summer Sessions and surveyed professors and teachers throughout the state with regard to their summer goals and their objections to proposed solutions to the elimination of the Summer Session. In reviewing enrollment patterns the Committee found that teachers were spread throughout the Summer Session courses and were not to be found in great numbers in any one course or area of emphasis. Therefore it would be extremely impractical to originate separate courses for the one or two teachers present in each course.

The surveys showed the teachers' general areas of interest and their willingness to adapt to special concentrated courses separated from the regular Summer Quarter in content and duration.

The solution the Committee arrived at was to begin a five-week Summer Program for Teachers. The Program, which began in the summer of

1967, consisted of "a unique series of intensive-study courses designed to be of particular value and interest to practicing teachers at every grade level," said the introductory circular sent to teachers in the state. "Planned and administered by the School of Education in cooperation with other departments of the University, the Summer Program offers teachers opportunities for professional improvement through intellectual stimulation and exposure to recent developments in several fields of specialization."

Each course in the Program meets three hours daily and carries nine quarter units of credit. One course constitutes a full academic load. Of course, those teachers who desire to enroll in the regular Summer Quarter are still welcome to do so.

The Summer Program for Teachers is intended to be self-supporting, as were the Summer Sessions of the past. The Summer Quarter, as an integral part of the regular academic year, is supported from state funds in the same manner as the other quarters. Thus the elimination of the Summer Session did not necessarily mean a reduction in the University budgetary requests. Indeed, to the extent that the Summer Quarter budget relies on more state funds than the Summer Session, the overall budget request of the University has risen.

A listing of tentative courses as proposed by Departments and Schools for the Summer Quarter of 1967 was included in the Provisional Catalog. Plans for the Summer Quarter proposed that students be able to make reasonable academic progress toward a degree during the summer.

A questionnaire regarding Summer Quarter plans was sent to Deans and Department Heads asking their plans and forecasts with regard to enrollment and staffing. (See Appendix B.)

Enrollment in the Summer Quarter had been programmed tentatively at 40 per cent of the Fall Quarter enrollment, or 11,000 for the campus as a whole. In November, 1964, projections of Summer Quarter enrollments for each department were distributed. As additional surveys of student intentions of Summer Quarter attendance were completed, the enrollment projections were refined. Summer Quarter course offerings proposed by the departments were based on these enrollment projections and the courses were incorporated into the Provisional Catalog. It was thought that even if student enrollment were to be well below 40 per cent at the start, successful operation of the Summer Quarter would necessitate offering the fullest practicable choice of courses.

The staffing of the Summer Quarter was also given serious consideration. It was expected that the faculty for the Summer Quarter would be an extension of the existing staff and would be essentially similar to the division among regular faculty, other teaching staff and visitors. During the initial years of transition, special staffing arrangements seemed desirable until permanent staffing additions had been completed. A proposed distribution of the staff needed for the initial Summer Quarter was:

25 per cent -- Berkeley faculty teaching the extra quarter for extra pay.

25 per cent -- Visitors from other University of California
campuses and from research units.

25 per cent -- Visitors from other universities.

25 per cent -- Regular new faculty appointments.

The 1967 Summer Quarter at Berkeley represented the initiation of year-round operation for the University of California. The absence of reliable comparative information for other institutions with summer or third term programs and the uncertainty concerning student interest in Berkeley's first Summer Quarter required a series of surveys of student and departmental opinions and plans.

Questionnaires were circulated to students in December, 1964, and to students enrolled in the first Summer Session in June, 1965, to analyse the competitiveness of a Summer Session with a concurrent Summer Quarter.

A questionnaire was also circulated among departments in 1965 to determine the extent of their preparations for the first Summer Quarter to occur in 1967.

Other surveys were taken in Spring 1967, to determine students' expected enrollment and potential course selection in order to provide departments with preliminary estimates of enrollment in particular courses. Another survey, in Summer 1967, focused on students' reasons for attending future Summer Quarters. These student surveys are being reinforced by a questionnaire sent to Summer 1968 students to probe in greater depth the reasons for attending and the degree of satisfaction with the Summer Quarter. Summaries of replies to the surveys are found in Appendix B.

VII.

EVALUATION OF THE QUARTER SYSTEM OF YEAR-ROUND EDUCATION AT BERKELEY

In evaluating the quarter system and year-round education it would doubtless be advantageous to review the objections that were raised at the time the change was being considered and to evaluate these objections in terms of the present situation at Berkeley. The objections that follow were gleaned from numerous reports, speeches, memorandums and bulletins that were in circulation at the time the change was being contemplated. These objections do not represent *all* possible objections, but are probably representative of the types of objections that prevailed.

In order to evaluate the degree to which the quarter system has resolved or not resolved these objections, structured interviews were held with the deans of each College in the University. In many cases the department heads were also present at these interviews to add their own opinions. By their nature, the deans often represent a repository of opinion for their respective departments due to their position as "sounding board" for professors and as highest counsel to students.

The quarter system at Berkeley, in the opinions of the deans interviewed, has overcome many of the objections to the change and has yet to overcome other objections. Education is a nebulous thing; it is very difficult to quantify a good educational system and say it is twice as good as a bad educational system. All one can attempt to do is remove many of the negative aspects of one system and replace them with positive aspects of another system. At Berkeley this was done under the constraint of year-round operation.

Objection:

Courses would need to be redeveloped to fit the longer class periods and the shorter time span of the quarter system.

Evaluation:

The necessary restructuring of the courses has led to fresh thinking. While curricular review and revision is a constant process in a distinguished university, the quarter system conversion presented a unique opportunity for course-by-course and over-all examination of the curriculum.

In 1967, Vice Chancellor Foster H. Sherwood of the Los Angeles campus described the nature of the transition throughout the University: "... the significance and practical effect of the decision to change to a quarter term calendar has been, and is, that it offered an unusual and rare opportunity, one that will not occur again for a decade or more, to effect a major and needed revision in the basic structure and total detail of our instructional program: general campus college and degree requirements, departmental major and curricula requirements and structures, and content and form of each and every course."

An indication of the extent and diversity of these changes for the Berkeley campus was suggested in a 1966 progress report titled: "New Calendar, New Directions" which stated: "some 36% of the present campus courses have been revised, 13% have been eliminated, while 26% of the courses are new. Only about 25% of the present courses have been transferred to the new system without substantial change -- and many of these have been revised or restructured during the past year or two."

Objection:

Condensation of courses may diminish their effectiveness in the judgment of some persons since students would have less time to assimilate materials.

Evaluation:

The need for student "gestation" time remains a major question in the minds of the deans. There has been no noticeable decline of quality of the students' work and grades have shown no adverse effects. If we assume that all students are affected equally by the shorter time period and that instructors grade on relative rather than absolute historical scales then there would be no reason for grades to change under the quarter system.

Objection:

Some extra-curricular features in the university might be adversely affected.

Evaluation:

Extra-curricular activities have not been affected under the quarter system. Some might hold the view that they have been on the increase, rather than declining.

Objection:

The two-semester plan is adjusted to the total tradition of public and private education. If it is modified the following consequences may be foreseen:

a. College students will either be encouraged to accelerate their progress, with the likelihood that they will become mentally fatigued, or be required to take off terms for vacations at periods which are inconvenient for them.

b. Faculty members might be tempted to teach too many terms consecutively with bad results both for the teacher and the student.

c. The pattern of the long summer recess will be disrupted, with the opportunity it offers for activities such as writing, travel, study and some types of research.

d. The student will lose his sense of identification with a class. Given more options as to his rate of progress, he will not think of himself specifically as a sophomore, junior or senior.

Evaluation:

a. It is difficult to measure a pattern of students' enthusiasm or fatigue. It was the Dean's impression that none had yet surfaced.

b. Under year-round operation, the maximum number of consecutive quarters of teaching to which a faculty member may be assigned is seven. While the period of a sabbatical leave, including sabbatical leave in residence, does not count toward the seven-quarter limit, quarters of teaching, both before and after sabbatical leave, do count. Moreoever, the taking of a sabbatical leave does not fulfill the requirement that a faculty member take at least one quarter off from departmental duties after the limit has been reached.

c. Students have not complained, nor even publicly mentioned concern for losing association with a class.

Objection:

Modification of the traditional calendar will bring up many administrative problems, some of them very difficult to handle:

a. The mechanics of registration and classification may become complicated. Additional registration periods would be expensive and bothersome; while new burdens would be placed upon counselors and University administrators.

b. Questions of salary are bound to arise. These would include the problem of compensation for any newly defined academic year. Similarly, under full-year operation a decision must be made as to the ratio by which the salaries of those who choose to teach for twelve months is to be increased. This applies also to the problem of fringe benefits for longer terms of employment. It may be argued that any deviation from the present plan is likely to raise, rather than decrease, the instructional cost per credit hour.

Evaluation:

a. The mechanics of registration and classification caused increased administrative headaches in the beginning due to the extra session. Most of the schools and colleges have solved this problem by advising the student once each year and having the office secretaries initial the quarterly programs as long as they correspond to the previously approved pattern. Exceptions are counselled as they were in the past. Thus student changes in plans are more easily accommodated because there is no longer the great crush of students awaiting counselors to initial routine quarterly programs. This management by exception concept has been said to reduce counselling by 50% over the year.

b. Faculty salaries are still handled on a nine and twelve-month basis. Faculty members employed on a nine-month basis wishing to teach an entire year are given additional salary and fringe benefits proportionate to the increase in time.

Objection:

Much of the faculty is already fully occupied on a 12-month basis. It is precisely during those periods when classes are not in session that faculty members do the bulk of research and writing upon which the growth and reputation of the university rests. Should year-round operation of the plan require faculty members to teach for longer periods and to accept additional administrative burdens, the effect might be to cut down on faculty research and publication.

The possibility that this might occur is one of the intangibles that is bound to have an adverse affect on staff morale. It might make it difficult to retain able people and may further complicate the already serious problem of recruiting new staff members.

Evaluation:

The Deans have not received any indication of changes in the amount of research or publication. The administrative load of the faculty, under the advising by exception illustration given previously, has not increased and, in many cases, has diminished somewhat.

No difficulty in recruiting new faculty members has been reported to be a result of the quarter system. Many recruited members, in fact, have had experience with the quarter system and prefer it.

Objection:

It should not be assumed that a large monetary savings will result from year-round operation. The increased operating expenses may be larger than the savings in capital expenditures. Nor should it be assumed that more than fifty percent of the fall enrollment will attend the Summer Quarter. Under the present calendar, students have the opportunity to accelerate their education; yet relatively few undergraduates attend our Summer Session. The result may be increased University expenses for fewer students.

Evaluation:

Year-round operation has resulted in increased operating expenses but these expenditures are expected to be more than offset by very substantial long term savings in capital outlays for new campuses. The added operating costs are for additional faculty members (salaries, office space, research needs) for library services, and for other instructional and administrative activities for the added Summer Quarter enrollments.

These enrollments are expected to reach 40% of the fall enrollment in the near future and will represent a 13% increase in the capacity of the campus. Thus, a campus such as Berkeley, with a planned enrollment ceiling of 27,500 students, can accommodate the equivalent of 31,500 students during the course of a year.

Capital outlays otherwise necessary to accommodate the additional students are reduced significantly. The additional faculty members needed for these additional students require office space and facilities, which means that the total reduction in capital expenditures will not be equal to the additional students served each year, but the reduction should be significant none-the-less.

Studies made by the California Coordinating Council for Higher Education and confirmed by the California State Department of Finance show, for year-round operation of the University of California and the State Colleges, a total increase of $103 million in operating expenses by 1976, but a total savings in capital outlays of $208 million -- a net savings to the taxpayers of California of $105 million by 1976. The University alone will save through year-round operation the equivalent of capital outlays for an entire campus of 27,500 by the year 2000.

APPENDICES

APPENDIX A: Curriculum Revision

One of the most important orders of business in the change from one educational system to another is the revision of curriculum. At Berkeley, the department chairmen were given historic data for their respective departments to follow in this planning process. Appendix A-1 illustrates the process and is self-explanatory.

The departmental forms illustrated in Appendix A-1 were then analyzed by the Curriculum Revision - Year-Round Operations Committee and in many cases returned to the departments for further revision when the department strayed too far from the guidelines. The sample summary analysis forms are shown in Appendix A-2.

When differences between departmental revisions and guidelines were resolved, a final comparison of count of courses and units for conversion to the quarter system was published. This is self-explanatory and is shown in Appendix A-3.

Appendix A-4 illustrates the process of revision by following one semester course, Business Administration 119, through the transitional phases of the 1965 Official Catalog to the Prototype Catalog, then to the Quarter System Provisional Catalog, then to the 1966-67 Course Listing, and finally into the final Quarter System Official Catalog where it has evolved into Business Administration 111.

Appendix A-1

Curriculum Revision:

Course Conversion to a Quarter System Calendar

- Departmental forms and explanations
- Used to supply departments with current and future enrollment figures
- Designed to achieve departmental consistency in reporting

Appendix A-1

November 3, 1964

CURRICULUM REVISION

Although the University of California at Berkeley will not enter upon a quarter calendar until September, 1966, the initiation of the quarter calendar for planning purposes is already upon us. Enrollment projections have been made for each of your courses with the hope that they provide useful guides in your planning. More important, perhaps are the total departmental enrollment projections, which have been made for every department of instruction at Berkeley. These total projections must be tentatively adhered to, in most instances, in order that the overall campus figures remain at levels consistent with limitations placed on campus student populations. Preparation of a prototype catalogue to be issued to all departments in February, 1965, requires that departmental recommendations be forwarded as soon as possible. The enclosed lists will not only provide you with planning data, but will be used as source material for the prototype catalogue.

Course conversion to the quarter system at the University of California at Berkeley will require considerable staff analyses and coordination to insure the effective development of new catalogues and new bulletins and concomitantly to insure that the established standards for teaching load, space utilization, and classroom assignment are not unbalanced by the sum of the reviews and revisions anticipated by the many different departments in the University. Towards these goals, a newly formed special staff unit of the Chancellor's will be working with you during the next two years.

The enclosed planning data for your department include: 1) duplicate forms showing every course in the 1963-64 catalogue with reported and estimated data, 2) a sample copy to aid you in completing the forms, and 3) notes explaining the items on the sample copy. Please complete the forms and return the original to the Office of Curriculum Revision - Year-Round Operations not later than December 15, 1964. Copies of your report will be made available to the Deans of the Colleges and Schools.

The first page of the list of courses for your department includes reported and estimated figures for your majors and total student credit hour teaching load. The latter figure represents the product of class enrollment and unit values. As you know, the Academic Plan of the University anticipates an ultimate student population count of 27,500 with a mix of 6,000 lower division, 9,500 upper division, and 12,000 graduate division students. The expected mix by Fall Quarter 1966-67 is 6,700 lower division, 9,700 upper division, and 11,100 graduate division students. Projections for each individual major field of study at the undergraduate and graduate level for Fall Quarter 1966 were first determined from trend data from the years 1954 to 1963 and then uniformly reduced to allow for the overall constraints placed upon the campus totals. Thus, a major field which has steadily increased in numbers from Fall 1954 to Fall 1963 from 50 to 150 students might reasonably expect to have about 180 students in Fall 1966, if uncontrolled growth were to continue. The University's enrollment limitations might require that this figure be scaled down to 160. The enrollment projections on page one of the enclosed forms are not final figures. New projections will be made as more registration data become available. Your comments on the current set of projected major enrollments are desired. For the moment, however, please keep your departmental plans consistent with the indicated departmental totals, since implementation of the overall campus ceiling requires that changes in the estimates for any major area must be balanced by off-setting changes in some other area or areas.

Your department may find that the estimates are larger than those expected from your own policy decisions to maintain a smaller enrollment level, or you may find them too small when measured against your existing facilities. If you think that such policy considerations justify special treatment in terms of student redirection, please explain in your letter of transmittal. In your considerations please bear in mind the overall restrictions placed on the campus totals.

The aggregated student credit hour estimates for your department for 1966-67 are derived from calculations involving the kinds and number of different student majors who enroll in your courses of instruction, the student's class or status and estimates of the number of these student majors for 1966-67. This atomistic approach permitted the development of course by course projections for the entire campus. The total SCH shown on page one of the forms is the sum of the individual course projections for your department. As with the estimated major enrollments, your comments on the aggregate student credit hour totals are desired; however, the same reminder concerning the required restraints on the campus totals applies here, also.

In completing the forms please observe the following procedures:

a) for every course enter your recommendation for conversion to quarter units whether or not they differ from the standard conversion;

b) for every course enter the converted student credit hours (SCH) which is the product of your unit conversion and the three-quarter enrollment.

c) for every course enter the number of weekly scheduled hours the students will spend in class meetings -- lecture, laboratory, discussion, quiz, seminar, etc.

d) for every course enter in the fall, and/or winter and/or spring the number of independent sections for the primary type of instruction of the course, i.e., if a lecture-laboratory course has three independent lecture sections and eight subordinate laboratory sections for each lecture section the figures to enter is 3 not 8 or 11;

e) indicate by the word DROP those courses which you do not expect to offer in 1966-67 (see sample copy);

f) indicate by the words NEW COURSE course entries which do not appear on the lists -- you must estimate the three-quarter enrollment for these courses and complete the other columns as noted in a) through d);

g) indicate revised course numbers on the same line as the old course number;

h) please remember that every dropped course for which there

Appendix A-1
(continued)

are projected three-quarter enrollment figures and every new course represents a change in the departmental total SCH shown on page one of the lists. If these changes do not cancel each other please explain in your transmittal letter the reasons you expect to have a lower or higher SCH enrollment;

i) return the original of each page no later than December 15, 1964.

Your cooperation and assistance in expediting this planning phase for the quarter calendar will be appreciated.

Appendix A-1
(continued)

November 3, 1964

EXPLANATION OF SAMPLE COPY

LINE

REFERENCE

A NUMBER OF MAJORS - REPORTED AND ESTIMATED

Undergraduate major figures are counts of juniors and seniors unless indicated otherwise. Individual group majors are not included in these counts.

Graduate major figures which include interdepartmental majors are so indicated.

Estimated major figures for 1966-67 (excluding summer) are based on two main factors: the trend in the growth or decline of the counts since Fall semester 1954 and the overall campus enrollment ceilings by divisions, lower, upper and graduate.

Estimated major figures for the Summer Quarter 1967 are based on assumed 40% total campus enrollment of the previous fall quarter's total campus enrollment. The individual estimates for each major curriculum vary from this percentage due to the differences in student number and student mix.

A NUMBER OF STUDENT CREDIT HOURS - REPORTED AND ESTIMATED

Reported student credit hours (SCH) for the year 1963-64 represent the sum of all SCH taught by the department in the fall and spring as reported in the mid-year summary of class enrollments.

Estimated SCH were derived in this manner: a) all class enrollments for Fall 1963 and Spring 1964 separately were summarized for each specific major curriculum for each specific course (there are well over 100 different undergraduate majors and almost 150 graduate majors -- the number of different courses taught at Berkeley in 1963-64 was almost 3,500); b) the summarized SCH in each course were then divided by the number of students in each major; c) the calculated value, in each case, represented the coefficient of the number of SCH created in a particular course by the majors in a particular curriculum; d) a further refinement included in these calculations was the separate treatment of the undergraduate majors by class, freshman, sophomore, junior, and senior; e) estimated major figures for 1966-67 were then introduced into the calculations to yield a projected count of SCH by course by department.

Summer quarter projected SCH were derived in an independent, but similar manner.

Please note that all of the SCH figures for 1966-67 quarters were projected on a semester unit basis and then converted to a quarter credit basis by multiplying by a factor of 1.5.

B COURSE #12

In 1963-64 the Department of Public Administration offered Course #12 both fall and spring semesters and enrolled a total of 250 students for the year. This three unit course, which produced 750 SCH (3 x 250), required the students to meet in classroom instruction for four hours per week (three lecture hours and one hour of discussion). One section only was taught each semester. The Department has retained the course number for the year 1966-67 and plans to offer the course each of the three regular quarters -- fall, winter, and spring. The projected total three-quarter enrollment of 200 times the standard conversion of a three unit semester course to a 4.5 unit (credits) quarter course yields a standard conversion projection of 900 SCH. The Department has recommended a conversion to a four credit value for Course #12, which yields 800 SCH. They plan to schedule five hours of class instruction per week.

C

D

E COURSES 21A AND #21L CHANGED TO #21

The standard conversion of courses #21A and #21L based on the projected three-quarter enrollment of 50 students each, yields a total of 300 SCH. The Department of Public Administration recommends that the two courses be combined as Course #21 by dropping the separate laboratory course #21L and offering the combined course fall and spring quarters with seven class hour meetings per week. The Department also recommends that an estimate of 70 class enrollments be anticipated due to the two sections being offered for the year 1966-67 compared to the single section held in 1963-64. The Department's recommendation of a five quarter unit conversion yields a total of 350 SCH for the regular year for Course #21.

F COURSE #110

The Department plans to offer course #110 in a manner similar to the current offering; i.e., the course will be given once only in the regular academic year, and the conversion to quarter units and SCH differs but little from the standard conversion. The course will be given in the winter quarter rather than in the fall.

G COURSE #126

The standard conversion and the Department's recommendations coincide: two semester units to three quarter units. This course, which combines lecture and laboratory class instruction, will require only one additional class hour per week in the quarter term.

H ADD NEW COURSE - #133

The Department of Public Administration recommends the addition of Course #133 to strengthen the major requirements for the B.S. degree due to the recommended consolidation of courses #150A-B into Course #150 (not shown on sample copy). The Department estimates a three-quarter enrollment of 30 students for course #133, which, at four quarter units, yields 120 SCH.

Appendix A-1 (cont'd)

SAMPLE COPY OF HOW A FORM MIGHT APPEAR AFTER DEPARTMENTAL CORRECTIONS

COURSE CONVERSION TO THE QUARTER SYSTEM

Current and Projected Course Enrollment at U.C. Berkeley

Line Reference	Number of Majors	Reported		Estimated			
		Fall 1963	Spring 1964	Fall 1966	Winter 1967	Spring 1967	Summer 1967
A	Undergraduate	100	85	90	85	87	35
	Graduate	50	45	60	56	58	20

Number of Student Credit Hours	Reported	Estimated	
	Year 1963 -64	Fall Winter Spring 1966-67	Summer 1967
Lower Division	1,010	1,200	175
Upper Division	2,000	2,850	400
Professional	0	0	0
Graduate	400	825	85

Line Reference	REPORTED 1963-64							ESTIMATED 1966-67									
	Course Number	Two-Semester Enroll.	Semester Units	Student Credit Hours	Sched. Weekly Hours per Student	Sections		Revised Course Number	Three-Quarter Enroll.	Conversion to Quarter Units		Conversion to Student Credit Hours		Sched. Weekly Hours per Student	Sections		
						Fall	Spr.			Stand*	Dept.	Stand*	Dept.		Fall	Winter	Spring
B	12	250	3	750	4	1	1		200	4.5	4	900	800	5	1	1	1
C	21A	65	3	195	3	1	0		50	4.5		225					
D								21	70		5		350	7	1	0	1
E	21L	65	1	65	4	1	0	Drop	50	1.5	Drop	75	Drop------------	------------	------	------	------
F	110	150	3	450	3	1	0		125	4.5	5	563	625	4	0	1	0
G	126	75	2	150	4	1	0		70	3	3	210	210	5	1	0	0
H	Add new Course------	------------	------------	------------	------------	------	------	133	30		4		120	4	0	0	1

DEPARTMENT:

*stand.- standard

Appendix A-2

Summary Analysis:

Departmental Proposals for Conversion
To a Quarter System Calendar

- Sample forms used to analyze departmental course proposals
- Designed to determine adherance to conversion guidelines

Appendix A-2

February, 1965

SAMPLE I

SUMMARY ANALYSIS*

DEPARTMENTAL PROPOSALS FOR CONVERSION TO A QUARTER SYSTEM CALENDAR

DEPARTMENT OF XXXX

	LOWER DIVISION	UPPER DIVISION	GRADUATE DIVISION	PROF. DIVISION	TOTAL
A. TOTAL COURSE CREDITS GUIDELINE I:					
1963-64 Actual	40	57	23		120
1966-67 Proposed	55	70	33		158
Difference: Ratio	1.4	1.2	1.4		1.3
Number	15	13	10		38
B. AVERAGE STUDENT CREDIT HRS. PER SECTION - GUIDELINE II:					
1963-64 Actual	833	134	72		374
1966-67 Standard Conversion	877	206	99		447
1966-67 Proposed	851	206	139		443
C. TOTAL STUDENT CREDIT HOURS					
1963-64 Actual	20,833	5,216	507		26,556
1966-67 Standard Conversion	28,059	8,428	1,084		37,571
1966-67 Proposed	27,222	8,434	1,527		37,183
Difference: Proposed to Standard					
Ratio	1.0	1.0	1.4		1.0
Number	-837	6	443		-388
D. NUMBER OF SECTIONS					
1963-64 Actual	25	39	7		71
1966-67 Proposed	32	41	11		84
Difference: Ratio	1.3	1.1	1.6		1.2
Number	7	2	4		13
E. NUMBER OF CLASSES					
1963-64 Actual	9	18	6		33
1966-67 Proposed	13	20	11		44
Difference: Ratio	1.4	1.1	1.8		1.3
Number	4	2	5		11

F. PERCENT OF CREDIT VALUES PROPOSED

Undergraduate only - Credit Value:	NUMBER	PERCENT	PERCENT: 3 OR LESS
3	16	52%	52%
4	9	29%	
5	6	19%	
	31	100%	

* Excludes all variable unit courses

SAMPLE II February, 1965

SUMMARY ANALYSIS*

DEPARTMENTAL PROPOSALS FOR CONVERSION TO A QUARTER SYSTEM CALENDAR

DEPARTMENT OF XXXX

	LOWER DIVISION	UPPER DIVISION	GRADUATE DIVISION	PROF. DIVISION	TOTAL
A. TOTAL COURSE CREDITS GUIDELINE I:					
1963-64 Actual		53	36		89
1966-67 Proposed		62	40		102
Difference: Ratio		1.2	1.1		1.1
Number		9	4		13
B. AVERAGE STUDENT CREDIT HRS. PER SECTION - GUIDELINE II:					
1963-64 Actual		70	46		62
1966-67 Standard Conversion		82	66		76
1966-67 Proposed		112	93		105
C. TOTAL STUDENT CREDIT HOURS					
1963-64 Actual		1,473	507		1,980
1966-67 Standard Conversion		2,288	1,048		3,336
1966-67 Proposed		3,144	1,496		4,640
Difference: Proposed to Standard					
Ratio		1.4	1.4		1.4
Number		856	448		1,304
D. NUMBER OF SECTIONS					
1963-64 Actual		21	11		32
1966-67 Proposed		28	16		44
Difference: Ratio		1.3	1.5		1.4
Number		7	5		12
E. NUMBER OF CLASSES					
1963-64 Actual		17	11		28
1966-67 Proposed		16	10		26
Difference: Ratio		.9	.9		.9
Number		-1	-1		-2

F. PERCENT OF CREDIT VALUES PROPOSED
Undergraduate only -

Credit Value:	NUMBER	PERCENT	PERCENT: 3 OR LESS
1	1	6%	6%
4	14	88%	
5	1	6%	
	16	100%	

* Excludes all variable unit courses

Appendix A-3

Comparison of Count of Courses and Units for Conversion to the Quarter System

- Used to evaluate campus-wide changes in course numbers and units of credit
- Campus totals given as example of departmental totals

COMPARISON OF COUNT OF COURSES AND UNITS FOR CONVERSION TO QUARTER

1965-66 & 1966-67

Sources used to determine workload factors were the 1965-66 General Catalogue, as printed, and the 1966-67 Provisional Catalogue, as printed. Each course offered by each department during the regular academic year (excluding summer sessions or summer quarter) was counted, including courses which were starred (i.e., courses not to be offered that academic year), since in the Provisional Catalogue many departments did not indicate which courses were to be starred. Each course was counted only once, even if it was to be offered more than once during the year. Sections were not counted. Individual study and research courses were listed separately under variable (Unit or Credit) courses.

A normal percentage increase in credits would have been about 50% in each department.

COMPARISON OF COUNT OF COURSES AND UNITS

	1965-1966			1966-1967			Percentage Change	
	Courses	Units	Variable Courses	Courses	Units	Variable Courses	Courses	Units
Department A	9	19	0	12	30	0	+33	+58
Department B	0	0	2	0	0	3	0	0
Department C	27	78	6	32	123	8	+19	+58
Department D	83	138	4	136	495	4	+64	+259
Department E	34	101	4	36	174	1	+6	+72
Department F	73	200	5	75	290	5	+3	+45
Department G	39	98	5	26	115	5	-23	+17
Department H	5	13	2	9	29	2	+80	+123
Department I	19	47	5	14	44	4	-26	-6
Department J	19	67	4	19	67	4	0	0
Department K	0	0	0	6	27	0		
Department L	24	81	4	23	91	4	-4	+12
Department M	82	315	4	119	467	4	+45	+48
Department N	0	0	1	0	0	1	0	0
Department O	37	83	7	38	109	7	+3	+31
Department P	35	115	7	39	141	7	+11	+23
Department Q	24	66	3	37	158	3	+54	+139
Department R	95	242	9	147	451	5	+55	+86
Department S	104	291	5	79	312	7	-24	+7
Department T	37	105	6	37	148	6	0	+41
Department U	0	0	0	3	12	0		
Department V	63	157	4	74	277	0	+17	+76
Department W	56	129	3	58	188	3	+4	+46
Department X	50	146	5	59	217	5	+18	+49

COMPARISON OF COUNT OF COURSES AND UNITS

	1965-1966			1966-1967			Percentage Change	
	Courses	Units	Variable Courses	Courses	Units	Variable Courses	Courses	Units
Department Y	89	267	5	73	349	5	-18	+31
Department Z	150	345	5	134	402	2	-11	+17
Department AA	82	226	5	87	293	6	+6	+30
Department BB	21	56	1	16	54	2	-24	-4
Department CC	116	345	5	133	683	6	+15	+98
Department DD	29	118	3	39	134	5	+34	+14
Department EE	39	106	4	44	156	5	+13	+47
Department FF	86	190	2	87	354	3	+1	+86
Department GG	12	32	3	15	53	5	+25	+66
Department HH	48	143	6	45	178	4	-6	+25
Department II	58	146	5	55	195	9	-5	+34
Department JJ	57	153	3	71	296	2	+25	+94
Department KK	183	465	5	142	706	3	-22	+52
Department LL	3	9	0	5	20	0	+67	+122
Department MM	30	92	5	35	139	5	+17	+51
Department NN	34	94	3	39	151	3	+15	+61
Department OO	28	72	3	28	107	4	0	+49
Department PP	19	58	5	33	127	4	+74	+119
Department QQ	100	214	1	123	369	1	+23	+72
Department RR	41	88	3	44	132	3	+7	+50
Department SS	20	49	4	31	108	6	+55	+120
Department TT	103	314	5	137	465	5	+33	+48
Department UU	93	271	7	130	444	5	+40	+64
Department VV	11	26	3	17	59	3	+55	+127
Department WW	8	20	0	12	27	0	+50	+35

ACTUAL FIGURES

	Semester 1965-66			Quarter 1966-67			Percentage Change	
	Courses	Units	Variable Courses	Courses	Units	Variable Courses	Course	Units
CAMPUS TOTAL								
Lower Division	399	1192		448	1764		+12	+48
Upper Division	1887	5245	133	2015	7791	146	+ 7	+49
Graduate	1687	4307	200	2019	6841	191	+20	+59
Total	3973	10744	333	4482	16396	337	+13	+53

Appendix A-4

Course Changes Illustrated

By Catalog Pages

18. Business Law: Introduction. (3) I and II. Mr. Stark

Prerequisite: at least sophomore standing. Not open to students planning to enter the School of Business Administration.

Introduction to law; contracts; sales; and agency.

Upper Division Courses

Prerequisite: Economics 1A–1B, 2 or equivalent, Mathematics 16A or equivalent and junior standing except where special provision has been made for students in certain curricula.

100. Economics of Enterprise. (3) I and II. The Staff

Prerequisite: Not open to students who have taken Economics 100B.

Economic analysis applicable to the problems of business enterprises in the areas of price, output, and utilization of resources; effects of business practices and policy on industry structure, consumers, labor and government.

101. Business Fluctuations and Forecasting. (3) I and II. The Staff

Prerequisite: course 100. Not open to students who have taken Economics 100A.

Factors responsible for economic instability: forecasting and other management problems thereby created for the business firm.

102. Advanced Managerial Economics. (3) II. Mr. Artle

Prerequisite: course 100 and 101.

Advanced analysis of the theory and practice of decision-making in business firms, utilizing the concepts and techniques of managerial economics.

103. Theory and Models of Economic Forecasting. (3) I. Mr. Bailey

Prerequisite: course 101.

Theory and analysis of long-run and short-run forecasts of business activity for the economy.

106. Real Estate Law. (3) I. Mr. Denton

Prerequisite: course 180.

Historical development of the law of real property; estates in land; other legal matters affecting real estate.

109. Legal Aspects of Business Transactions. (3) I and II. Mr. Davies

Prerequisite: course 118.

A review of the legal implications of certain common business transactions and situations, including problems arising in sales, installment buying, inventory financing, obtaining and extending credit, negotiable instruments and insolvency.

118. Legal Environment of Business. (3) I and II.
Mr. Smith, Mr. Epstein, Mr. Conant, Mr. Denton

An analysis of the legal processes and techniques of legal reasoning, followed by applications to the law of contracts, sales, agencies, and business organizations.

119. Social and Political Environment of Business. (3) I and II.
Mr. Epstein, Mr. Kennedy, Mr. Blankenship, Mr. Cheit, Mr. Ross

Prerequisite: senior standing.

Evolution of American business and the changing framework of its operation, responsibilities, and social control. Analysis of current problems in the light of different philosophies of business and changing political and social goals.

120. Industrial Accounting—Measurement, Analysis, and Planning. (2) I.

Prerequisite: senior standing and a satisfactory background in mathematics, statistics and production. Not open to students enrolled in Schools of Business Administration.

Accounting as a system of measurement and its use in analyzing, planning and controlling the operations of industrial enterprises.

120L. Industrial Accounting—Measurement, Analysis, and Planning. (1) I.

May be taken with course 120 or subsequently. ———

Laboratory. Systematic work in accounting data processing and analysis. Comparison of manual and machine accounting, including electronic data processing. Supervised problem work or field trip.

121A–121B. Advanced Accounting. (3–3) I and II.
Mr. Moonitz, Mr. Staubus

Two lectures and one two-hour laboratory section per week to be arranged. Prerequisite: course 1A–1B.

Advanced theory of financial accounting and its application. Selected problems and reading.

122. Cost Accounting. (3) I and II. Mr. Vatter, Mr. Staubus

Lectures, and a two-hour laboratory period per week to be arranged. Prerequisite: course 1A–1B.

Principles of product cost determination and the accumulation and use of cost data in planning and controlling enterprise operations. Manufacturing application emphasized.

123. Auditing. (3) I and II. Mr. Vance, Mr. Boutell

Lectures, and a two-hour laboratory period per week to be arranged. Prerequisite: course 121A.

Concepts and procedures for verification of financial records together with the ethical, legal, and other professional aspects of auditing.

124. Budgetary Control and Accounting Systems. (3) I and II.

Prerequisite: course 121A–121B and 122. Mr. Boutell

The design and maintenance of efficient accounting systems for managerial control, including the study of computer-oriented systems.

126. Problems of Financial Reporting. (3) I. Mr. Anton

Prerequisite: course 121A–121B.

Consolidated statements, index number adjustments of financial data, special problems.

131. Corporation Finance. (3) I and II.

Prerequisite: course 1A–1B. Mr. Brewer, Mr. Keenan, ———, ———

Financial aspects of promotion and organization, operation as a going concern, expansion and consolidation, failure and reorganization; the capital market, financial instruments and institutions; public regulation of security issues and security exchanges.

***132. Interpretation of Financial Statements.** (3) I. ———

Prerequisite: course 1A–1B, 131, and consent of instructor. Not open to students who have taken course 126. Should not be elected by students specializing in accounting.

133. Investments. (3) I and II. Mr. Babcock, ———

Prerequisite: course 131.

Sources of, and demand for, investment capital, operations of security markets, determination of investment policy, and current procedures for analysis of securities.

135. Risk Management for Business Firms. (3) II. Mr. Goshay

Prerequisite: course 137.

Economic risk and business management's alternatives in dealing with it.

136. Life Insurance. (3) I. Mr. Goshay

Prerequisite: course 137.

A nontechnical study of theory and practice.

137. Economics of Insurance. (3) I and II. Mr. Holland

An introduction to the underlying principles of insurance, followed by a descriptive study of the practices in the more important branches of the insurance business.

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* Not to be given, 1965–1966.

models of the decision problem, rational choice under uncertainty, linear and nonlinear programming, sequential descriptive models, multistage control. --CARMAN, PYE

109. LEGAL ASPECTS OF BUSINESS TRANSACTIONS. (4) II.
Three 1 1/2-hour lectures per week. A review of the legal implications of certain common business transactions and situations, including problems arising in sales, installment buying, inventory financing, obtaining and extending credit, negotiable instruments, and insolvency, with emphasis on the Uniform Commercial Code.
-- M. SMITH

117. LAW, GOVERNMENT AND ECONOMIC ENTERPRISE. (4) I and IV.
Three 1-hour lectures per week. An analysis of the impact of law upon American economic enterprise and the role of government participation in the operation of our business community. Discussion of current problems in the fields of unfair competition, securities regulations, pricing and marketing, and taxation.
--CONANT, EPSTEIN

118. LEGAL ENVIRONMENT OF BUSINESS. (4) I, II, III, and IV.
Three 1 1/2-hour lectures per week. An analysis of the law and the legal process, emphasizing the nature and functions of law, legal reasoning, and the operation of law within the U.S. federal system, followed by a discussion of the legal problems pertaining to contracts and related topics, business associations, and the impact of law on economic enterprise. --CONANT, DENTON,

119. SOCIAL AND POLITICAL ENVIRONMENT OF BUSINESS. (4) I, II, III, and IV.
Three 1-hour lectures per week. Study of the evolution of American business in the context of its changing political and social environment. Analysis of the origins of the American business creed, the concept of social responsibility of business, and the expanding role of the corporation. --CHEIT, KENNEDY, VOTAW

Three 1-hour lectures per week. Prerequisite: primarily for students in engineering departments. Not open to students enrolled in the Schools of Business Administration. Not open to students who have taken course 1A-1B. Accounting and its uses in analyzing, planning, and controlling the operations of industrial enterprises.
--MATTESSICH, STAUBUS

120L. INDUSTRIAL ACCOUNTING LABORATORY. (1) I.
One 2-hour laboratory per week. Prerequisite: course 120 (may be taken concurrently). Laboratory exercises in industrial accounting. Supervised case studies of field trips. --MATTESSICH, STAUBUS

121A-121B. FINANCIAL ACCOUNTING. (4-4) I, II, III, and IV.
Two 1 1/2-hour lectures per week and one 2-hour laboratory per week. Prerequisite: course 1A-1B. Required for those specializing in accounting. Course 121A with a grade not lower than C is prerequisite to course 121B. Theory of accounts and its application. Selected readings and problems, with emphasis on financial accounting.
--MOONITZ, STAUBUS, TRACY

122. COST ACCOUNTING. (4) II, III, and IV.
Two 1 1/2-hour lectures and one 2-hour laboratory per week. Prerequisite: course 1A-1B; course 121A is recommended. Principles of cost compilation and cost accounting techniques, including cost control devices and managerial use and analysis of cost accounting data; primary emphasis on industrial applications. --MATTESSICH, STAUBUS, TRACY

123. AUDITING. (4) I, III, and IV.
Two 1 1/2-hour lectures and one 2-hour laboratory per week. Prerequisite: course 121A. Completion of course 121B strongly recommended. Concepts and procedures for verification of financial records together with the ethical, legal, and other professional

1A-1B. PRINCIPLES OF ACCOUNTING. (5-5) I, II, III, and IV.
Two 1 1/2-hour lectures and two 1 1/2-hour laboratories per week. Prerequisite: at least sophomore standing. 1A is prerequisite to 1B.
1A. Basic accounting data, records, and statements with their external and managerial uses and limitations. The laboratory work includes programming and solution of accounting problems using an electronic computer.
1B. Cost accounting and other managerial accounting methods, special statements, and special problems of various forms of business organizations. The computer application is continued in the laboratory.
--THE STAFF (ANTON, VANCE IN CHARGE)

10. GENERAL ACCOUNTING. (4) II and III.
Three 1 1/2-hour meetings per week. Prerequisite: at least sophomore standing in any department of the University. Not open to students who have taken or are planning to take course 1A-1B. Accounting principles and procedures with emphasis on managerial and decision-making aspects. Preparation and interpretation of financial statements. --THE STAFF (ANTON IN CHARGE)

UPPER DIVISION

100A. THE PRICE SYSTEM AND BUSINESS ENTERPRISE. (4) I, II, III and IV.
Three 1 1/2-hour lectures per week. Prerequisite: Economics 1A-1B, Mathematics 16A. Economic analysis applicable to the problems of business enterprises with emphasis on the determination of the level of prices, outputs, and inputs; effects of the state of the competitive environment on business and government policies.
--MONSON, PYE, STEKLER

100B. BUSINESS DECISION MAKING. (4) I, II, III, and IV.
Three 1 1/2-hour lectures per week. Prerequisite: course 100A. Analysis of the theory and practice of decision making in the firm; development of decision rules involving uncertainty as applied to investment, pricing, and activity analysis. --ARTLE, PYE

100C. BUSINESS FLUCTUATIONS AND FORECASTING. (4) I, II, III and IV.
Three 1 1/2-hour lectures per week. Prerequisite: courses 100A, 100B, Economics 2 or Statistics 2 or 12. Analysis of the operation of our enterprise system with emphasis on the factors responsible for economic instability; analysis of public and business policies which are necessary as a result of business fluctuations.
--SCHAAF, STEKLER

102. ADVANCED MANAGERIAL ECONOMICS. (4) III.
Three 1 1/2-hour lectures per week. Prerequisite: courses 100A, 100B, and 100C. Advanced analysis of the theory and practice of decision making in business firms, utilizing the concepts and techniques of managerial economics. --ARTLE

103. THEORY AND MODELS OF ECONOMIC FORECASTING. (4) II.
Three 1 1/2-hour lectures per week. Prerequisite: courses 100A, 100B, and 100C. Theory and analysis of the long-run and short-run forecasts of business activity for the economy. --STEKLER

106. LEGAL ASPECTS OF REAL ESTATE. (4) II and IV.
Three 1-hour lectures per week. Prerequisite: course 180. The law affecting ownership and use of real property; transfers; titles; development rights and the regulation thereof in the public interest.
--DENTON

108A. STATISTICAL ANALYSIS FOR BUSINESS DECISIONS. (4) I.
Three 1 1/2-hour lectures per week. Statistical analysis, as used in managerial and other business problems. Covers binomial, Poisson, and normal distributions, sampling theory and problems of inference, regression analysis. --CARMAN, PYE

108B. QUANTITATIVE BUSINESS DECISION MODELS AND TECHNIQUES. (4)
I, II and III.
Three 1 1/2-hour lectures per week. Uses of formal models,

LOWER DIVISION

1. PRINCIPLES OF ACCOUNTING I. (5) I, II, III and IV.
(Formerly number 1A) Two 1½-hour lectures and three hours of laboratories per week. Prerequisite: at least sophomore standing. Basic accounting data, records, and statements with their external and managerial uses and limitations. The laboratory work includes programming and solution of accounting problems using an electronic computer. --THE STAFF (ANTON, VANCE IN CHARGE)

2. PRINCIPLES OF ACCOUNTING II. (5) I, II, III and IV.
(Formerly numbered 1B.) Two 1½-hour lectures and three hours of laboratories per week. Prerequisite: course 1. Cost accounting and other managerial accounting methods, special statements, and special problems of various forms of business organizations. The computer application is continued in the laboratory. --THE STAFF (ANTON, VANCE IN CHARGE)

10. GENERAL ACCOUNTING. (4) II and III.
Three 1½-hour meetings per week. Prerequisite: at least sophomore standing in any department of the University. Not open to students who have taken or are planning to take courses 1 and 2. Accounting principles and procedures with emphasis on managerial and decision-making aspects. Preparation and interpretation of financial statements. --THE STAFF (ANTON IN CHARGE)

UPPER DIVISION

100. THE PRICE SYSTEM AND BUSINESS ENTERPRISE. (4) I, II, III and IV.
Three 1½-hour lectures per week. Prerequisite: Economics 1A-1B, Mathematics 16A. Economic analysis applicable to the problems of business enterprises with emphasis on the determination of the level of prices, outputs, and inputs; effects of the state of the competitive environment on business and government policies. --MONSON, PYE, STEKLER

101. BUSINESS FLUCTUATIONS AND FORECASTING. (4) I, II, III and IV.
Three 1½-hour lectures per week. Prerequisite: courses 100 and Statistics 2 or 12. Analysis of the operation of our enterprise system with emphasis on the factore responsible for economic instability; analysis of public and business policies which are necessary as a result of business fluctuations. --SCHAAF, STEKLER

102. ADVANCED MANAGERIAL ECONOMICS. (4) III.
Three 1½-hour lectures per week. Prerequisite: courses 100 and 101. Advanced analysis of the theory and practice of decision making in business firms, utilizing the concepts and techniques of managerial economics. --ARTLE

103. THEORY AND MODELS OF ECONOMIC FORECASTING. (4) II.
Three 1½-hour lectures per week. Prerequisite: courses 100 and 101. Theory and analysis of the long-run and short-run forecasts of business activity for the economy. --STEKLER

110. LEGAL ENVIRONMENT OF BUSINESS. (4) I, II, III, and IV.
(Formerly numbered 118) Three 1½-hour lectures per week. An analysis of the law and the legal process, emphasizing the nature and functions of law, legal reasoning and the operation of law within the U.S. federal system, followed by a discussion of the legal problems pertaining to contracts and related topics, business associations, and the impact of law on economic enterprise. --CONANT, DENTON, EPSTEIN, M.SMITH,

111. SOCIAL AND POLITICAL ENVIRONMENT OF BUSINESS. (4) I, II, III and IV.
(Formerly numbered 119.) Three 1-hour lectures per week. Study of the evolution of American business in the context of its changing political and social environment. Analysis of the origins of the American business creed, the concept of social responsibility of business, and the expanding role of the corporation. --CHEIT, KENNEDY, VOTAW

[illegible]
(Formerly numbered 109.) Three 1½-hour lectures per week. A review of the legal implications of

Eugene W. Burgess, Ph.D., Lecturer in Industrial Relations, Emeritus.
D. Douglas Davies, LL.B., Lecturer in Business Law.
Frank D. Deromedi, M.B.A., Lecturer in Business Administration.
John Henry Denton, LL.B., Lecturer in Business Administration.
Robert E. Einzig, Ph.D., Lecturer in Business Administration.
Edwin M. Epstein, LL.B., Lecturer in Business Administration.
William Goldner, Ph.D., Lecturer in Business Administration.
Ronald S. Graybeal, M.A., Lecturer in Business Administration.
William M. Keenan, M.S., Acting Assistant Professor of Business Administration.
Wayne C. Lee, Ph.D., Assistant Professor of Psychology.
Robert F. Love, M.A., Lecturer in Business Administration.
Norman P. Monson, M.S., Acting Assistant Professor of Business Administration.
John G. Myers, M.B.A., Acting Assistant Professor of Business Administration.
J. Bruce Neighbor, Ph.D., Lecturer in Business Administration.
Franklin C. Stark, J.D., Lecturer in Business Law.
Arthur I. Stonehill, Ph.D., Acting Assistant Professor of Business Administration.
John P. Van Gigch, M.B.A., Lecturer in Business Administration.
Willard I. Zangwill, M.S., Acting Associate Professor of Business Administration.

For general information concerning the School of Business Administration, please see page 27.

THE CURRICULUM I. Lower Division.
Students may complete lower division requirements for the College of Letters and Science or its equivalent at other institutions, or they may elect to complete lower division work in one of the colleges of applied sciences. A student should normally choose the lower division preparation most closely related to the particular field and division of business administration he wishes to enter. Advisers in 350 Barrows Hall will assist lower division students in selecting courses prerequisite to certain upper division courses. Detailed information on lower division preparation is available in the ANNOUNCEMENT OF THE SCHOOL OF BUSINESS ADMINISTRATION.

II. Upper Division.
A minimum of 44 upper division credits of courses in business administration, including the following:

100 (The Price System and Business Enterprise)
101 (Business Fluctuations and Forecasting)
110 (Legal Environment of Business)
111 (Social and Political Environment of Business)
130 (Financial Management)
140 (Introduction to Production Management)
150 (Industrial Relations)
160 (Marketing)
190 (Organization and Administration)
A minimum of 8 credits beyond the basic courses in one field.

The following fields of emphasis are approved: accounting, administration and policy, finance, industrial relations and personnel management, insurance and risk management, international business, managerial economics, marketing, production management, quantitative methods, operations research, real estate and urban land economics, transportation and public utilities. Students who do not wish to elect one of the above fields may (1) fulfill the requirement by approved courses in economics (2) elect special programs with permission of the Associate Dean of the School.

PREPARATION FOR GRADUATE STUDY. Admission to the Graduate School of Business Administration requires evidence of superior scholarship and an acceptable bachelor's degree. In evaluating applications, maturity, demonstrated capacity for leadership, and intellectual activity of a high order are taken into account.

THE GRADUATE PROGRAM. The Master's degree requires a minimum residence of three quarters for those with a B.S. degree in Business Administration from the University of California or another institution of acceptable standing. A minimum of six quarters (the first three quarters composed of special core courses) is required for students with no previous work in business administration. The core courses include basic work in quantitative methods (economic analysis, quantitative decision models and techniques, statistics, accounting), business law, finance, marketing, production, and industrial relations. All graduate students must maintain a B average in all courses taken since receipt of the bachelor's degree and must pass a comprehensive examination. Details of the graduate program are found in the ANNOUNCEMENT OF THE SCHOOL OF BUSINESS ADMINISTRATION.

Department Business Administration

As of March, 1966

Page 1 of 3

Course Number	Course Title	Units	Quarters Offered				Quarter System Course Pre-requisites	Semester System Course Pre-requisites	Scheduled Class Hours per Week			Course Number in Provisional Catalogue	Equiv. Course in 1965-66 Catalogue
			F	W	Sp	Su			Lec	Lab	Oth		
1	Prin.of Acctg. I	5	x	x	x	x	Soph.standing	Soph.standing	3	3		1	1A
2	" " II	5	x	x	x	x	B.A.1	B.A.1A	3	3		2	1B
10	General Acctg.	4	x		x		Soph.standing	Soph.standing	4½			10	10
100	Price Syst.& Bus.Enter.	4	x	x	x	x	Math 16A,Econ 1-3	None	4½			100	100
101	Bus.Fluct.& Forecstg.	4	x	x	x	x	100,Stat.2	100	4½			101	101
102	Adv.Manag.Econ.	4			x		100 & 101	100 & 101	4½			102	102
103	Theory & Models of Econ.Forecstg.	4		x			100 & 101	101	4½			103	103
111	Soc &Pol Environ of Business	4	x	x	x		None	None	4½			111	119
115	Leg Aspct of Real Est	4		x			180	180	4½			115	106
117	Law Gov & Econ Enter	4	x		x		None	None	3			117	None
120	Indus Acctg.	3	x		x		None	None	3			120	120
120L	Indus Acctg Lab	1	x		x		120	120		2		120L	120L
121	Fin Acctg I	4	x	x	x	x	B.A.2	1A-1B	3	2		121	121A
122	Fin Acctg II	4	x	x	x	x	121(Grade C)	121A	3	2		122	121B
123	Prob of Fin Reportg	4	x				122	121A-121B	3	2		123	126
124	Cost Acctg	4	x	x	x	x	2 (121 recom)	1A-1B	3	2		124	122
126	Auditing	4	x		x	x	121(122 recom)	121A	3	2		126	123
127	Acctg Syst for Mgmt	4		x		x	122, 124	121A-121B,122	3	2		127	124
128	Income Taxation	4	x		x		121	None	3	2		128	None
130	Fin Mgmt	4	x	x	x	x	B.A.2	1A-1B	4½			130	131
133	Investments	4	x	x	x		130	131	4½			133	133
137	Econ of Insurance	4	x	x	x		None	None	4½			137	137
138	Contemp Prob in Ins	4		x			137	None	4½			138	None
140	Intro to Prod Mgmt	4	x	x	x	x	None	None	3	1		140	140
141	Plan of Prod Facil	4	x				140	140	3	2		141	141
142	Prod Control Syst	4		x			140	140	3	2		142	142
150	Indus Relations	4	x	x	x	x	None	None	4			150	150
151	Hum Behav in Org	4		x	x	x	150 or Ec 150	150 or Ec 150	4			151	151
152	Coll Bargain Syst	4			x		150 or Ec 150	150 or Ec 150	4			152	152
153	Labor Law	4	x	x			150 or Ec 150	150 or Ec 150	4			153	153
160	Marketing	4	x	x	x	x	None	None	4½			160	160
161	Indus Procurement	4		x			160 or 160G	160	4½			161	145
162	Retailing	4	x	x			160 or 160G	160	4½			162	162
163	Advertising	4	x		x		160	160	4½			163	163
165	Marketing Mgmt	4		x	x	x	160	160	4½			165	165
166	Wholesaling	4	x				160	160	4½			166	166
169	Mktg.Policies & Prob	4		x	x		Mktg emphasis	160 + 2 crses.	4½			169	169
170	Phys Distr &Trans Mgt	4		x			None	None	4½			170	170A-170B
174	Contemp Prob in Trans	4			x		None	None	3			174	179
175	Oper.Research I	4	x		x		Math 1A-1B-1C	Math 3A-B,Stat 130A-130B	4			175	193
176	Oper.Research II	4		x			175,Stat 131 or 134	None	4			176	None
177	Computers & Mod Organ	4	x				1-2	None	4			177	None
180	Intr to Real Est & Urban Land Econ	4	x	x	x	x	None	None	4½			180	180
181	Val of Real Prop	4	x	x			180	180	4½			181	181
183	Mgt of Real Est Res	4			x		180	180	4½			183	183

1966-67 COURSE LISTING

Department **Business Administration**

As of March, 1966

Page 2 of 3

Course Number	Course Title	Units	Quarters Offered				Quarter System Course Pre-requisites	Semester System Course Pre-requisites	Scheduled Class Hours per Week			Course Number in Pro-visional Catalogue	Equiv. Course in 1965-66 Catalogue
			F	W	Sp	Su			Lec	Lab	Oth		
185	Intro to Int'l Bus	4	x	x		x	100, 101	None	4½			185	161
188	Int'l Bus Environ	4	x		x	x	Econ 190A	161	4½			188	186
190	Organ & Admin	4	x	x	x	x	None	None	3	2		190	190
191	Mgt.Prob & Pol	4			x		100,140,160	100,140,160	4			191	191
198A	Directed Gp Study	1-4	x				None	None	-			198A	198A-198B
198B	" "	"		x			"	"	-			198B	"
198C	" "	"			x		"	"	-			198C	"
198D	" "	"				x	"	"	-			198D	"
199A	Spec Study for Adv Undergrad	1-4	x				Senior with B Average	Senior with B Average	-			199A	199A-199B
199B	" "	"		x			"	"	-			199B	"
199C	" "	"			x		"	"	-			199C	"
199D	" "	"				x	"	"	-			199D	"
100G	Quant.Meth in Bus Op	8	x		x		None	None	10			100G	100G
101G	Econ Anal for Bus I	4	x	x	x	x	None	None	4			101G	101G
102G	Econ Anal for Bus II	3	x	x	x	x	101G	None	3			102G	"
107G	Quant Bus Dec Models	4	x	x	x	x	None	None	4½			107G	None
108G	Stat Anal for Bus	3	x	x	x	x	107G	2 yrs hisch math	4½			108G	103G 118G
111G	Leg Pol & Soc Environ	3	x	x	x	x	None	None	3			111G	
120G	Acctg I	4	x	x	x	x	None	None	4			120G	120G
121G	Acctg II	3		x	x	x	120G	None	3			121G	120G
122G	Fin Acctg	4			x		121G	1A-1B or 120G	3	2		122G	121G
130G	Fin Policies of Bus	3	x	x	x	x	121G	120G	3			130G	131G
140G	Prod Organ & Mgmt	3	x	x	x	x	None	100G	2	1½		140G	140G
150G	Indus & Pers Rel	3	x	x	x	x	None	100G	3			150G	150G
160G	Mktg Org & Pol	3	x	x	x	x	100G or 102G	100G	3			160G	160G
203	Bus Fcstg:Tech & Appl	4	x				102G or equiv	101G or equiv	4			203	203
205	Sem in Bus Econ	4		x			None	None	4			205	None
206	Sem in Dig Computers	4		x	x		None	None	3			206	210
211	Sem on Modern Corp	4		x			None	None	3			211	None
*217	Interact.Bus & Gov	4					None	None	3			217	None
221	Sem in Acctg Theory I	4	x	x			122G	121A-121B	3			221	229A
222	Sem in Acctg Theory II	4		x	x		221	121A-121B	3			222	229B
224	Sem in Contrlrship I	4	x	x			121G,122G,124	121A-121B,122	3			224	222A
225	Sem in Contrlrship II	4			x		224	222A	3			225	222B
226	Aud Prac & Prob I	4		x			126	121A-121B,122	3			226	223A
227	Aud Prac & Prob II	4			x		226	123	3			227	223B
228	Sem in Inc Taxation	4		x		x	128	121A-121B,228A	3			228	228B
230	Theory of Fin Mgmt	4	x	x	x	x	130G	None	3			230	234
232	Money Mkts & Fin Inst	4	x	x	x		None	131, Econ 135	3			232	232
233	Sec Mkts & Invstmt Pol	4	x	x	x		230	133	3			233	233A-233B
234	Sem in Bus Finance	4	x	x		x	230	None	3			234	None
235	Sem in Fin Intermed	4		x	x		232	None	3			235	None
236	Sem in Investments	4		x	x	x	233	None	3			236	None
237	Risk & Insurance	4	x		x		137	None	3			237	None
239	Sem in Insurance	4		x			None	None	3			239	239
241	Fac Plng &Prod Cont	4	x				140G	140 or 140G	3	1		241	241
242	Prod Programming	4		x			241	None	4			242	242
243	Anal for Prod Mgmt	4			x		None	None	4			243	None
248	Sem in Prod Mgmt	4			x		140G &one other	None	4			248	248
255	Sem in Manpwr Econ	4	x				150 or equiv.	None	3			255	255A

*Not to be given, 1966-1967

William Goldner, Ph.D., *Lecturer in Business Administration.*
Myron Gordon, Ph.D., *Visiting Professor of Business Administration.*
Stuart G. Gould, M.B.A., *Associate in Business Administration.*
Ronald S. Graybeal, Ph.D., *Lecturer in Business Administration.*
Melvin M. Greenball, M.B.A., *Acting Assistant Professor of Business Administration.*
John P. Holland, C.P.C.U., B.S., *Lecturer in Business Administration.*
Marshall C. Howard, Ph.D., *Visiting Professor of Business Administration.*
George D. Hughes, Ph.D., *Visiting Professor of Business Administration.*
William M. Keenan, M.S., *Lecturer in Business Administration.*
Ernest Koenigsberg, Ph.D., *Lecturer in Business Administration.*
J. Bruce Neighbor, Ph.D., *Lecturer in Business Administration.*
Denis Neilson, M.B.A., *Associate in Business Administration.*
Richard U. Ratcliff, Ph.D., *Visiting Professor of Business Administration.*
Bill Roberts, M.S., *Acting Assistant Professor of Business Administration.*
Richard L. Sandor, A.B., *Acting Assistant Professor of Business Administration.*
Willard I. Zangwill, Ph.D., *Acting Associate Professor of Business Administration.*

For general information concerning the School of Business Administration, please see page 75.

Undergraduate Curriculum

Lower Division Students may complete lower division requirements for the College of Letters and Science or its equivalent at other institutions, or they may elect to complete lower division work in one of the colleges of applied sciences. A student should normally choose the lower division preparation most closely related to the particular field and division of business administration he wishes to enter. Advisers in 310 Barrows Hall will assist lower division students in selecting courses prerequisite to certain upper division courses. Detailed information on lower division preparation is available in the ANNOUNCEMENT OF THE SCHOOL OF BUSINESS ADMINISTRATION.

Upper Division A minimum of 44 upper division units of courses in business administration, including the following:

100 (The Price System and Business Enterprise)
101 (Business Fluctuations and Forecasting)
110 (Legal Environment of Business)
111 (Social and Political Environment of Business)
130 (Financial Management)
140 (Introduction to Production Management)
150 (Industrial Relations)
160 (Marketing)
190 (Organization and Administration)

A minimum of 8 units beyond the basic course in one field.

The following fields of emphasis are approved: accounting, administration and policy, finance, industrial relations and personnel management, insurance and risk management, international business, managerial economics, marketing, production management, quantitative methods, operations research, real estate and urban land economics, transportation and public utilities. Students who do not wish to elect one of the above fields may (1) fulfill the requirement by approved courses in economics, (2) elect special fields with permission of the Associate Dean of the School.

Preparation for Graduate Study Admission to the Graduate School of Business Administration requires evidence of superior scholarship and an acceptable bachelor's degree. In evaluating applications, maturity, demonstrated capacity for leadership, and intellectual activity of a higher order are taken into account.

The Graduate Program

The master's degree requires a minimum residence of three quarters for those with a B.S. degree in Business Administration from the University of California or another institution of acceptable standing. A minimum of six quarters (the first three quarters composed of special core courses) is required for students with no previous work in business administration. The core courses include basic work in quantitative methods (economic analysis, quantitative decision models and techniques, statistics, accounting), business law, finance, marketing, production, and industrial relations. All graduate students must maintain a B average in all courses taken since receipt of the Bachelor's degree and must pass a comprehensive examination. Details of the graduate program are found in the ANNOUNCEMENT OF THE GRADUATE SCHOOL OF BUSINESS ADMINISTRATION.

Lower Division Courses

1. Principles of Accounting I. (5)

(Formerly numbered 1A)

Two 1½-hour lectures and 3 hours of laboratories per week. *Prerequisite: at least sophomore standing.* Basic accounting data, records. and statements with their external and managerial uses and limitations. The laboratory work includes programming and solution of accounting problems using an electronic computer. The Staff (Mr. Anton, Mr. Vance incharge) (F, W, Sp, Su)

2. Principles of Accounting II. (5)

(Formerly numbered 1B)

Two 1½-hour lectures and 3 hours of laboratories per week. *Prerequisite: course 1.* Cost accounting and other managerial accounting methods, special statements, and special problems of various forms of business organizations. The computer application is continued in the laboratory.
The Staff (Mr. Anton, Mr. Vance in charge) (F, W, Sp, Su)

10. General Accounting. (4)

Three 1½-hour meetings per week. *Prerequisite: at least sophomore standing in any department of the University.* Not open to students who have taken or are planning to take courses 1 and 2. Accounting principles and procedures with emphasis on managerial and decision-making aspects. Preparation and interpretation of financial statements.
The Staff (Mr. Anton in charge) (W, Sp)

Upper Division Courses

Prerequisite: Economics 1–3, Statistics 2 or equivalent, Mathematics 16A or equivalent and junior standing except where special provision has been made for students in certain curricula.

100. The Price System and Business Enterprise. (4)

Three 1½-hour lectures per week. *Prerequisite: Economics 1–3, Mathematics 16A.* Not open to students who have taken Economics 100B. Economic analysis applicable to the problems of business enterprises with emphasis on the determination of the level of prices, outputs, and inputs; effects of the state of the competitive environment on business and government policies.
Mr. Goldner, Mr. Graybeal, Mr. Roberts, ——— (F, W, Sp, Su)

101. Business Fluctuations and Forecasting. (4)

Three 1½-hour lectures per week. *Prerequisite: courses 100 and Statistics 2 or 20.* Not open to students who have taken Economics 100A. Analysis of the operation of our enterprise system with emphasis on the factor responsible for economic instability; analysis of public and business policies which are necessary as a result of business fluctuations.
Mr. Goldner, Mr. Graybeal, ——— (F, W, Sp, Su)

102. Advanced Managerial Economics. (4)

Three 1½-hour lectures per week. *Prerequisite: courses 100 and 101.* Advanced analysis of the theory and practice of decision making in business firms, utilizing the concepts and techniques of managerial economics. ——— (Sp)

103. Theory and Models of Economic Forecasting. (4)

Three 1½-hour lectures per week. *Prerequisite: courses 100 and 101.* Theory and analysis of the long-run and short-run forecasts of business activity for the economy. ——— (W)

110. Legal Environment of Business. (4)

(Formerly numbered 118)

Three 1½-hour lectures per week. An analysis of the law and the legal process, emphasizing the nature and functions of law, legal reasoning and the operation of law within the U.S. federal system, followed by a discussion of the legal problems pertaining to contracts and related topics, business associations, and the impact of law on economic enterprise. Mr. Conant, Mr. Denton, Mr. Epstein,
[illegible]

111. Social and Political Environment of Business. (4)

(Formerly numbered 119)

Three 1-hour lectures per week. Study of the evolution of American business in the context of its changing political and social environment. Analysis of the origins of the American business creed, the concept of social responsibility of business, and the expanding role of the corporation.
Mr. Blankenship, Mr. Epstein, Mr. Kennedy, Mr. Votaw (F, W, Sp, Su)

[illegible]

(Formerly numbered 109)

Three 1½-hour lectures per week. A review of the legal implications of certain common business transactions and situations, including problems arising in sales, installment buying, inventory financing, obtaining and extending credit, negotiable instruments, and insolvency, with emphasis on the Uniform Commercial Code. Mr. M. Smith (W)

APPENDIX B: Summer Quarter Enrollment and Attitude Determination

An important step in the transition to year-round operation concerns projection of enrollments. Past experience enabled relatively accurate projection of enrollments during the Fall, Winter and Spring Quarters, but because there was no comparable data to use in determining enrollments for the Summer Quarters a series of questionnaires concerning attendance at the 1967 Summer Quarter were initiated as early as 1964.

These surveys concerned not only student attitudes about attending during the summer, but also departmental attitudes concerning planning and participation in Summer Quarters. Obviously the two problems went hand-in-hand. Students, even though they may desire to do so, can only enroll in courses to the extent that the department offers them. The departments, on the other hand, have to be aware of student needs in order to plan the courses they give.

Thus, a departmental survey concerning the 1967 Summer Quarter, endeavored to determine departmental plans for the first Summer Quarter and also the specific space and staffing needs that might affect these plans. This survey is summarized in Appendix B-1.

Student attitudes toward year-round operation were first surveyed in 1964 and 1965. The former questionnaire was given to students taking courses in the spring of the "regular" academic year and the latter was given to students attending the Summer Session that was the forerunner to the Summer Quarter. These surveys are summarized in Appendix B-2.

Questionnaires were also given to students in the Spring of 1967 in an attempt to finalize enrollment projections for the 1967 Summer Quarter, the first under year-round operation. A further questionnaire was given during the 1967 Summer Quarter to determine reasons for attendance. The results of these surveys are shown in Appendix B-3 and Appendix B-4.

A fairly detailed attitudinal survey has been conducted of students attending the 1968 Summer Quarter. The analysis of the responses will be published in late 1968 by the Office of Institutional Research at Berkeley. Preliminary results of the survey indicate one of the most important reason for attendance was maintenance of normal progress toward a degree. Demographically the students paralleled very closely students of other quarters.

One of the most distinctive attributes of the summer quarter was its high proportion of students new to the Berkeley campus. Ranging from 58% of the freshmen down to 10% of the seniors and graduates, the proportion of new students during Summer 1968 was only one third lower than the Fall 1967 figure and was four times higher than in Winter or Spring of 1968. Since an equally high concentration of new students existed in Summer 1967 as well, it appears that summer quarter is providing an important new point of entry, especially for undergraduates. Other aspects of the survey may be found in Appendix B-4.

Appendix B-1

Planning for Summer-Quarter

Instruction

- Analysis of departmental questionnaire responses concerning enrollment, staffing and summer session attitudes
- Questionnaire responses

December 3, 1965

PLANNING FOR SUMMER-QUARTER INSTRUCTION

In its meeting of October 11, 1965, the Berkeley Division of the Academic Senate instructed the Committee on Educational Policy to evaluate the feasibility and quality of the instructional program that is being planned for the Summer Quarter of 1967, or, in larger terms, to evaluate the way in which the summer period of 1967 can best be used. In the Division's meeting on November 8, our Committee answered this question, in principle, using educational quality as its criterion. Transformation of even the present Summer Session into a Summer Quarter would produce improvement in three major factors: the lengthened span of instruction (from six weeks to ten), the more rigorous screening of applicants, and the initiation of State support. Within our commitment both to some type of summer offering and to the Quarter schedule, we should not delay in beginning to reap the principle benefits of the latter.

In order to obtain a comprehensive view of the projected Summer Quarter, this Committee and the Committee on Year-Round Operations have jointly prepared and circulated a questionnaire for departmental chairmen, providing information on the nature and extent of departmental problems in staff recruitment, space, and adequacy and quality of available student programs. As a basis for responding to the questionnaire, the *Provisional General Catalogue*, published in October, has provided the departments with an overall view of the 1967 Summer Quarter.

With its lower total enrollment, substantial differences can arise within departments in the range and type of course offering in the Summer Quarter, as compared with the other quarters, and in this respect great variations can occur among the departmental plans. *The course offerings should be attuned carefully to departmental capabilities*, and probably more so than in the present plans. We note that, while 49 of 58 departments responding to the question believe they will be able to maintain (in the Summer Quarter of 1967) their normal level of educational quality, nine departments thought this would not be possible. Some departments indicated they will have difficulty in recruiting faculty for the summer. Moreover, in several departments, the staff expansion made necessary by the Summer Quarter cannot be accommodated in the space now available or foreseen. A substantial majority of the departments indicated that, with proper choice of courses in other quarters, their student majors could make reasonable progress toward graduation through attendance in the 1967 Summer Quarter.

Initiation of the Summer Quarter is contingent upon budgetary support to maintain educational quality comparable to the other quarters. President Kerr has approved for transmittal to the State Department of Finance an operating budget of $6,649,520 for operation of a 1967 Summer Quarter at Berkeley, which corresponds to a 40 percent level of operation relative to the other quarters. An additional capital budget item of $800,000 for land acquisition has been requested.

Enrollment

The Berkeley departments now plan to offer about 660 courses in the summer of 1967, a figure which represents between 30 and 35 percent of the fall quarter offerings. The departmental responses as a whole indicate an ultimate increase in number of courses offered in subsequent summer quarters to a campus-wide level of around 40 percent. Successful operation of the summer quarter necessitates offering the fullest practicable choice of courses.

An analysis of current and past information on summer-session registrations, of surveys of student opinion on probable summer-quarter attendance, and of enrollment data from institutions already on the quarter system indicates that no less than 30 percent, and possibly as much as 40 percent, of the fall quarter enrollment may seek to enroll in the Summer Quarter of 1967.

Policies governing graduate registration and new admissions which have as yet to be formulated could markedly influence the size of summer quarter registration figures and the enrollments in particular courses. While some departments indicated a low potential registration for their graduate majors, others stated that their programs would be heavily weighted toward graduate study in the summer. Although half of the departments anticipated that graduate students would not make use of formal courses in the summer, more than two-thirds stated that the graduates would use the special study and research courses.

In the questionnaire, the Committees requested reactions to a proposal to admit students from other campuses and other universities to the Summer Quarter on a limited-status basis. The departments responded in favor of such admission, in a ratio of seven to one. (The Educational Policy Committee agrees with the majority, subject to the provision that there is available capacity in the individual courses desired after regularly matriculated students have been accommodated.)

Staffing

To maintain educational quality in the summer quarter requires staff competence fully equal to that in the other terms, and, at the outset, special staffing arrangements will be required until the necessary additional permanent faculty members have been appointed. In departmental responses to the questionnaire, the problem most consistently indicated is the difficulty in recruiting qualified permanent faculty. Additional concern was noted in some instances of the recruitment of qualified visitors. The Departmental planning for staffing the 1967 Summer Quarter and over the long range, as revealed by the questionnaire, involves a campus-average staff composition of about 55 percent regular faculty (half on extra pay and half with time off in a subsequent quarter), 15 percent newly appointed faculty, and 30 percent visitors. Many departments indicate that the proposed staffing pattern would maintain the quality of instruction. Individual departments varied widely from the campus-average summer staffing pattern, for reasons such as expected difficulty in recruiting visitors or the situation that in some departments the faculty is already on a year-round basis.

Space limitations strongly influence departmental plans for the faculty growth required to serve anticipated future summer-quarter attendance. Many departments reported that they could add a small percentage of full-time-equivalent faculty over a period of five to ten years with no increase in space, but at the cost of additional crowding; these are primarily departments not engaged in laboratory research. Some key departments are now in a straitjacket, with extensive needs unmet that seriously hamper their potentiality for any substantial summer offering.

As departments grow beyond a certain size, they become more impersonal, non-homogeneous, and inefficient. It is useful to observe that the *average* department responding would accept a growth of 21 percent and viewed 33 percent as the upper limit of tolerable growth. If we allow for the staff expansion to accommodate a larger proportion of graduate students and the expansion represented by positions already allocated but unfilled, the estimated optimum growth would be nearer to 10 percent. Thus, the present indication is that Berkeley's capacity for long-term growth is limited to a 40 percent summer quarter enrollment.

While some departments thought their faculty would not wish to teach during the summer, inasmuch as they prefer to use that period to do research, take vacations, write, or the like, other departments said that many of their faculty members plan to teach in the summer quarter so as to be free in another quarter. We note that under present budget conditions, staff choice to postpone teaching in the 1966-67 academic year in anticipation of teaching in the Summer Quarter of 1967 will not be possible.

Summer Sessions

Opinions on plans to offer summer-session courses concurrent with Summer Quarter courses were strongly negative. Many departments urged that no Summer Session be offered, and almost all of the departments agreed that if some modified Summer Session were proposed, it should not compete with, or detract from, the Summer Quarter.

SUMMARY OF QUESTIONNAIRE RESPONSES

Part I. Departmental Planning

I A. It is expected that a budgetary commitment for the Summer Quarter of 1967 will be sought from the Legislature in the coming six months. Will confirmation of the needed budgetary provisions by April 1966 provide adequate "lead time" for recruiting the faculty members, both temporary and permanent, needed to staff the program you now plan for Summer 1967?

Number of Departments Responding	Percent	Answer
45	73%	Yes
2	3	No
10	16	Uncertain
5	8	No recruiting needed
62	100%	

I B. What number of summer quarter courses does the Provisional Catalogue show for your department? What number do you actually expect to be able to offer in Summer 1967 (assuming adequate operating budget and limited additional space elsewhere on campus)? In the longer range, what number of courses do you expect to offer if provision of needed space and facilities is made (assuming enrollment in the Summer Quarter approximates 40% of fall enrollment on a campus-wide basis)? Please discuss the differences between these figures.

a) Total Summer Quarter 1967 courses in Provisional Catalogue	684
b) Total now proposed for 1967	661
Percent change	-3.4%

c)	Total proposed in the longer range	781*
	Percent change	14.2%
	Total departments responding	62

*Departments not responding to b) and/or c) were assumed to have the same number of courses as indicated in a) or b).

I C. To what probable extent will each of the following sources be used for staffing the summer quarter in your department?

	Average Percent		Range Percent	
	1967	Longer Range	1967	Longer Range
1967-67 regular faculty, on extra pay?	25%	19%	0-100	0-75
1966-67 Regular faculty, with time off in subsequent quarter?	31	37	0-100	0-100
1967-68 newly appointed faculty?	14	15	0-70	0-100
"Visitors" from research institutes at Berkeley	4	4	0-75	0-67
Visitors from other UC campuses	4	4	0-25	0-25
Visitors from other universities, or elsewhere?	22	21	0-100	0-75
Total	100%	100%		
Total departments responding	54	47		

If staffed as above, will quality of instruction be maintained?

Total Departments Responding	Percent	Answer
44	76%	Yes
9*	16	No
5	8	Uncertain
58	100%	

I D. What is now the budgeted faculty FTE for your department?

How many additional faculty FTE for the academic year 1967-68 are needed to staff the Summer 1967 courses your department now plans?

---

*The nine departments where educational quality would suffer comprise six in science and three in the humanities; difficulty in recruitment is the cause for six, space for one, conflict with faculty field work for one, and general objections to the quarter calendar for one.

_____ FTE to staff the anticipated courses for the longer-range steady state? _____FTE (Each staff member teaching in summer quarter is equivalent to .33 FTE.)

a)

Current FTE faculty	1340
Additional FTE for Summer Quarter 1967	125**
Percent additional	9%
Total departments responding	60

b)

Current FTE faculty	1241
Additional FTE for longer range	187
Percent additional	15%
Total departments responding	55

c) Distribution of additional FTE needed for individual departments (in percentages)

Percent Increase	Departments Responding Summer 1967	Longer Range
0-10%	40	21
11-25	18	26
26-50	2	8
	60	55

I E. On the assumption of a student demand for summer quarter instruction well in excess of 40% for the campus, what is the largest FTE to which your regular faculty could grow in a 5-10 year period?

a) if limited by *present* office and research space? _____FTE

b) if limited by your department's ability to recruit qualified faculty members? _____FTE

c) if limited by your department's ability to incorporate new faculty members into programs? _____FTE

d) what additional office and research space would this amount of growth entail? _____ sq. ft.

**It is evident from the manner in which departments answered these questions that the figures relate solely to new permanent faculty added to the academic departments and exclude provisions for visitors and present Berkeley faculty members who will elect to teach.

a) If limited by present space:

Present FTE faculty	1222
Proposed FTE faculty	1297
Percent increase	6%
Departments responding	51

b) If limited by recruitment:

Present FTE faculty	914
Proposed FTE faculty	1217
Percent increase	33%
Departments responding	37

c) If limited by ability to incorporate new faculty:

Present FTE faculty	968
Proposed FTE faculty	1279
Percent increase	32%
Departments responding	40

d) Additional space needed for this growth in faculty:

Total request	326,534 sq. ft.
Average request	8,825 sq. ft.
Departments responding	37

Distribution	Number of Departments
0-1000	13
1000-2000	4
2000-5000	7
5000-10,000	7
10,000-25,000	4
45,000	1
116,140	1
	37

Part II. Student Programs

II A. Will the course offerings presently planned for the Summer Quarter of 1967 allow a student majoring in your departmental field to make "reasonable progress" toward graduation, with respect to:

1) course required or elective in your department?

2) courses required or elective outside your department?

Distribution of responses:

Level of Student--Summer 1967	1) Courses in Your Department			2) Courses Outside Your Department		
	a)	b)	c)	a)	b)	c)
Graduating Summer 1967	8	27	20	10	25	6
" Fall 1967	7	30	18	9	26	6
" Winter 1968	9	30	15	11	25	5
" Spring 1968	15	28	12	15	23	3
Entering Junior	19	23	11	13	24	2
" Sophomore	26	15	6	14	17	1
" Freshman	22	13	7	14	15	1

Classifications: a) Yes, regardless of choice in other quarters.
b) Yes, with proper choice in other quarters.
c) No, regardless of choice in other quarters.

II B. Among the other departments giving the most work needed by students in your major, please list the ones whose proposed Summer 1967 offerings are adequate or inadequate for meeting the needs of your students.

2 departments were rated "too few" by 4 departments
4 departments were rated "too few" by 2 departments
18 departments were rated "too few" by 1 department
2 departments were rated "adequate" by 8 departments
1 department was rated "adequate" by 7 departments
2 departments were rated "adequate" by 5 departments
5 departments were rated "adequate" by 3 departments
8 departments were rated "adequate" by 2 departments
17 departments were rated "adequate" by 1 department

II C. In the absence of separate offerings in the Summer Session, students from other campuses and other universities may seek to enroll in the Summer Quarter. If such applicants are admitted for the Summer Quarter only, "Limited Status" might be an appropriate classification. The qualifications of such applicants would need to be reviewed from three viewpoints: a) overall acceptability to the University; b) preparation for the individual courses desired; c) availability of non-priority space in such courses.

1. Does your department favor the admission of such limited-status applicants to summer quarter courses up to the limits of available space in the sections already arranged?

Total Departments Responding	Percent	Answer
53	88%	Yes
8	13	No
60*	101%	

*One department reported their faculty as evenly divided.

2. Does your department favor any participation of your advisers or instructors in the admission process for such students?

Total Departments Responding	Percent	Answer
16	26%	Adviser
16	26	Instructor
29	47	Neither
2	3	Other
62*	102%	

*One department suggested both adviser and instructor.

II D. Do you anticipate that the graduate students in your department will make substantial use of formal summer quarter courses? Of 298-299 (independent study) summer quarter courses?

	Total Departments Responding	
	Yes	No
Formal courses	25	31
298-299 courses	42	12

Part III. Request for General Comments

III A. The foregoing questionnaire is based on the premises that long-term educational advantages for students regularly matriculated in the University lie in the direction of an adequately staffed ten-week Summer Quarter schedule under State financing, and that prompt moves toward that objective will cause it to be approached more rapidly. On this basis any summer session in 1967 should be offered in a way that does not compete with, or detract from, the summer quarter. Please express the view of your department on this question.

Total Departments Responding	Percent	Answer
43	84%	Agree
8	16	Disagree
51	100%	

III B. What size of faculty does your department consider optimum? If the department were to grow beyond this figure (by, say, 20%) would the disadvantages be major or minor?

a) Present FTE faculty 948
Proposed optimum FTE faculty 1144
Percent increase 21%
Departments responding 46

b) Disadvantages of growth beyond the optimum figure:

Total Departments Responding	Percent	Answer
15	37%	Major
26	63	Minor
41	100%	

III C. The initiation and growth of summer quarter activities must occur with optimum educational benefit to the State. A variety of recognized general problems must be dealt with. In addition, however, the Berkeley Campus needs to avoid difficulties of a local nature such as can be anticipated, and perhaps solved, only with the specialized insight available at the departmental level. Please indicate here any special problems you believe might arise in your own departmental area, which might bear adversely on the quality of instruction or on the calibre and creativity of your faculty.

	Problems Briefly Stated	Number of Departments Commenting
a)	Space	6
b)	Interferes with vacations, research, and time for reflection	7
c)	Staffing and recruiting difficulties	11
d)	Heavy summer undergraduate program will interfere with graduate effort	3
e)	Management problems both academic and non-academic will increase	2
f)	Lack of time for advising, grading, paper work	3
g)	Concern over possible four or more consecutive quarters of teaching	2
h)	Budgeting problems and rigidity (red tape)	1
i)	Quality of program may suffer	5
j)	Six courses per year too many (and general problems of high teaching load)	4
k)	Difficult to plan courses of two or three quarter sequence	2
l)	No problems indicated in comments	10
m)	Departments which made no comment	8

* * *

Department replies received by tabulation date	62
Departments responding that questionnaire was inapplicable	11
Departments not responding by tabulation date	3

Appendix B-2

Analysis of Competitiveness of Summer Session with Concurrent Summer Quarter

- Questionnaire of December 1964
- Questionnaire of Summer 1965

ANALYSIS OF COMPETITIVENESS OF SUMMER SESSION WITH CONCURRENT SUMMER QUARTER; FROM RESPONSES OF STUDENTS TO TWO QUESTIONNAIRES

I. Questionnaire of December 1964 -- given to students entering Spring Semester 1965.

It did not mention a possible Summer Session, but asked questions pertaining to Summer Quarter attendance (related to other quarters). The students were asked if they would attend a summer quarter in terms of which of the four quarters they would attend from 1965-70. The responses were that, on the average:

The Winter Quarter would be 95% of the preceding Fall Quarter.

The Spring Quarter would be 86% of the preceding Fall Quarter.

The Summer Quarter would be 22% of the preceding Fall Quarter the first year and the following Summer Quarters would range from 10% to 17% for the same group of students (of those 16,297 students who answered the questionnaire).

The students were asked when they would prefer a "break", responses were:

10% prefer a break in a quarter other than the summer.

15% have no preference.

64% prefer a summer "break."

8% prefer attending continuously.

3% failed to respond.

When students were asked why they enjoyed having summers free, responses were:

44% support self.

12% work experience.

14% break from study.

15% don't prefer break.

7% travel.

5% be with family.

Although some of these preferences would express a tendency not to attend the summer session at all, if these students did attend during the summer, the following reasons would express their preference for a summer session over a summer quarter: "support self", "work for experience", "study break", and "be with family". Reasons favoring the quarter would be: "don't prefer break" and "travel" (the latter group might select summer enrollment so they could travel another quarter). In all, 75% would favor the summer session, (of which, 56% probably would not attend at all), while 22% favor the quarter.

II. Questionnaire of Summer 1965 -- given to students entering the first summer session 1965. A total of 6,564 responded; of those, 48% were Berkeley students, 53% University of California students (all campuses, including Berkeley), 26% other students, 14% teachers, and 7% other occupations. Three types of responses will be considered: 1) their preference for having available to them either a summer session in conjunction with a summer quarter or a summer quarter only, 2) the probability of their attendance if only a summer quarter were available, and 3) preference for attending a summer session or summer quarter if both were available.

1) Preference for a summer session in conjunction with a summer quarter to a summer quarter only. 77% of the students prefer to have both available, while only 4% prefer the quarter only. Among teachers, 84% want both, while only 1% prefer the quarter only.

Occupation	Summer Session with Summer Quarter	Summer Quarter Only
University of California		
Berkeley - Undergraduate	77%	6%
Graduate	61%	7%
Total	72%	6%
University of California (Other Campuses)	81%	3%
University of California Total	73%	6%
Other Students	81%	2%
Teachers	84%	1%
Other Occupations	73%	4%
Total	77%	4%

2) Probability of attendance if only the summer quarter is offered:

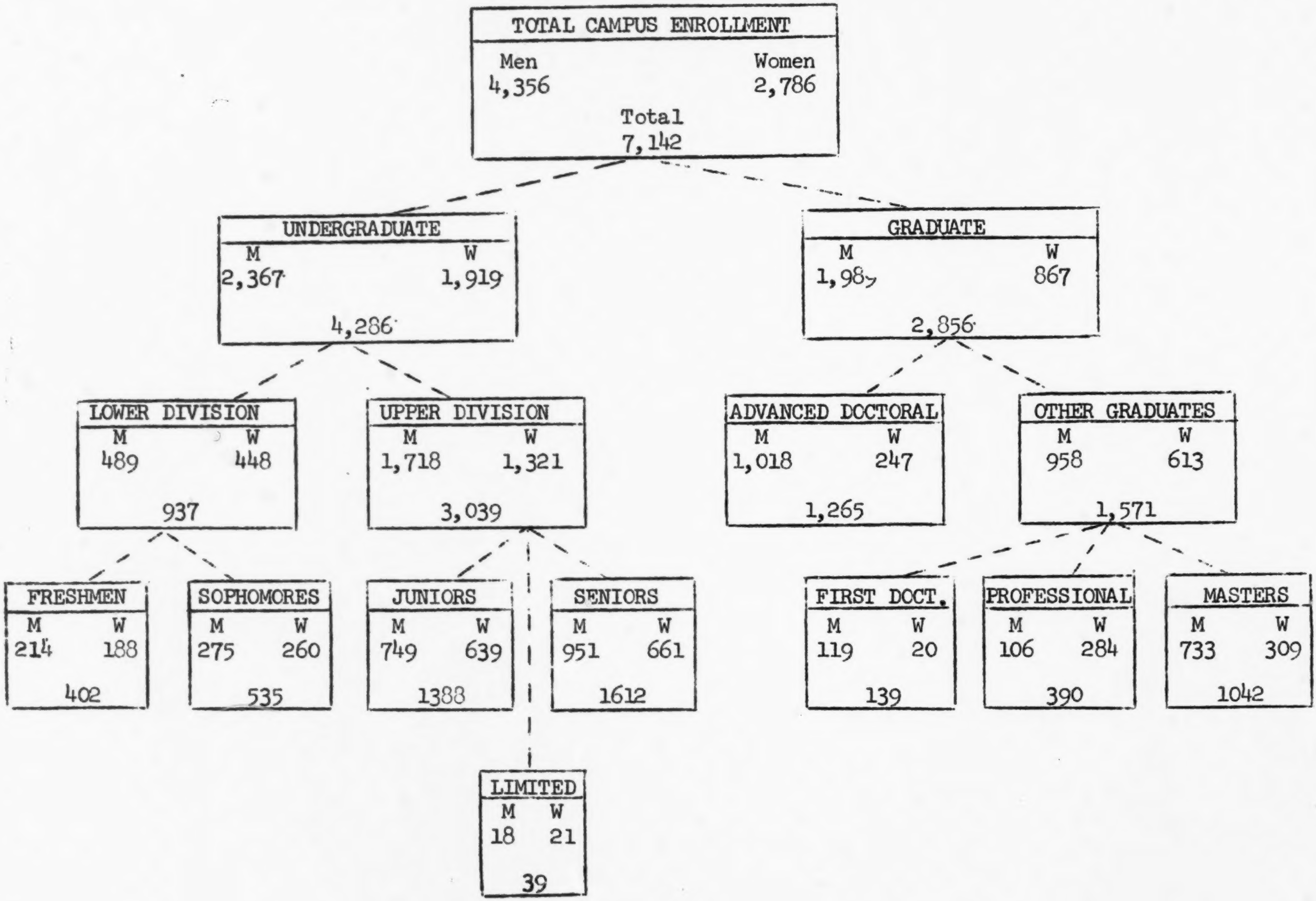
Occupation	Would Attend	Would Not Attend
University of California		
Berkeley - Undergraduate	56%	33%
Graduate	61%	21%
Total	57%	30%
University of California (Other Campuses)	48%	41%
University of California Total	57%	31%
Other Students	52%	35%
Teachers	45%	44%
Other Occupations	53%	30%
Total	53%	33%

Appendix B-3

1967 and 1968 Summer Quarter Enrollment Statistics

SUMMER 1967

ENROLLMENT SUMMARY

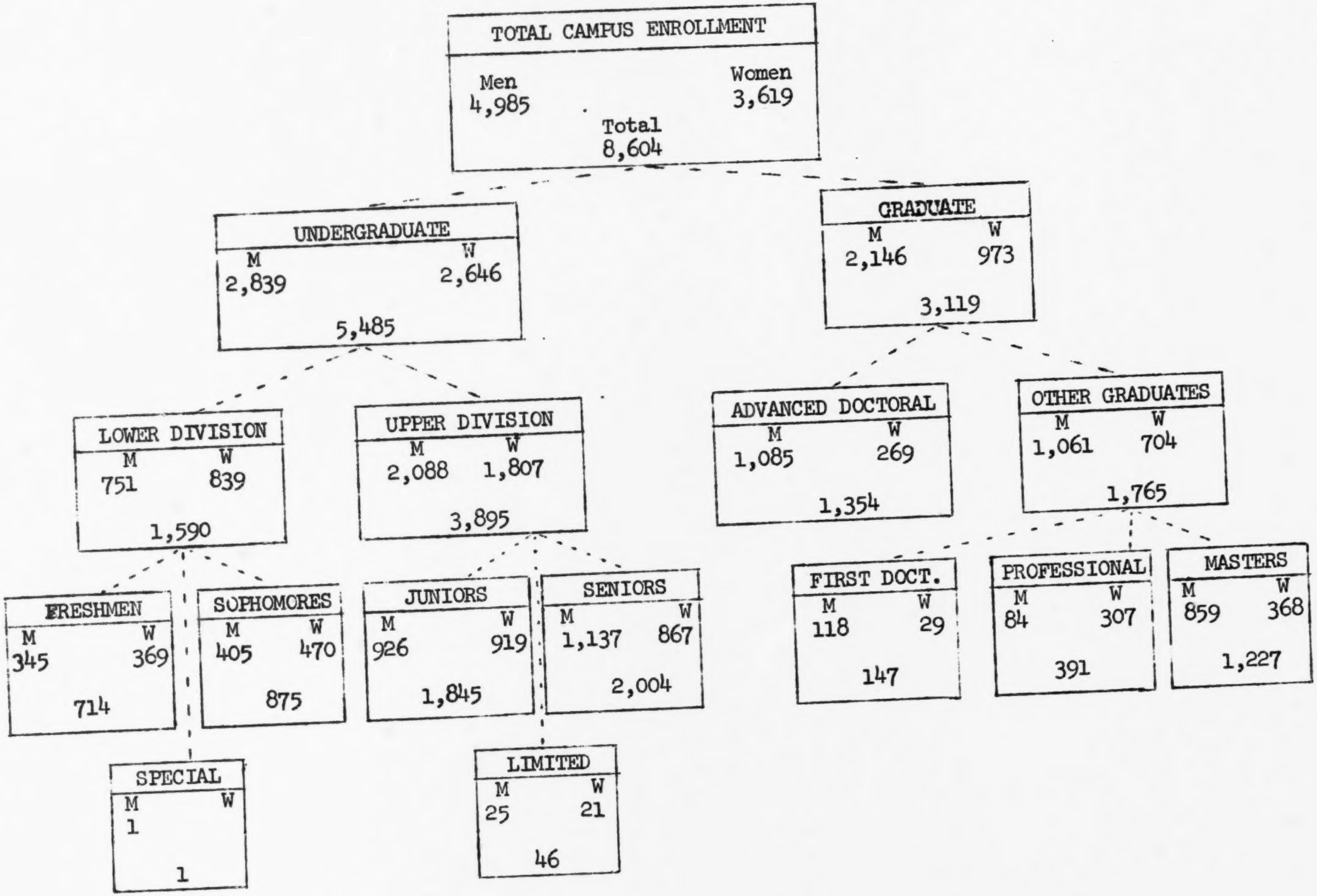

TOTAL CAMPUS ENROLLMENT
Men
4,356
Women
2,786
Total
7,142
UNDERGRADUATE
M
2,367
W
1,919
4,286
GRADUATE
M
1,989
W
867
2,856
LOWER DIVISION
M
489
W
448
937
UPPER DIVISION
M
1,718
W
1,321
3,039
ADVANCED DOCTORAL
M
1,018
W
247
1,265
OTHER GRADUATES
M
958
W
613
1,571
FRESHMEN
M
214
W
188
402
SOPHOMORES
M
275
W
260
535
JUNIORS
M
749
W
639
1388
SENIORS
M
951
W
661
1612
FIRST DOCT.
M
119
W
20
139
PROFESSIONAL
M
106
W
284
390
MASTERS
M
733
W
309
1042
LIMITED
M
18
W
21
39

Appendix B-3

Appendix B-3

Summer 1968

ENROLLMENT SUMMARY


TOTAL CAMPUS ENROLLMENT
Men 4,985
Women 3,619
Total 8,604
UNDERGRADUATE
M 2,839
W 2,646
5,485
GRADUATE
M 2,146
W 973
3,119
LOWER DIVISION
M 751
W 839
1,590
UPPER DIVISION
M 2,088
W 1,807
3,895
ADVANCED DOCTORAL
M 1,085
W 269
1,354
OTHER GRADUATES
M 1,061
W 704
1,765
FRESHMEN
M 345
W 369
714
SOPHOMORES
M 405
W 470
875
JUNIORS
M 926
W 919
1,845
SENIORS
M 1,137
W 867
2,004
FIRST DOCT.
M 118
W 29
147
PROFESSIONAL
M 84
W 307
391
MASTERS
M 859
W 368
1,227
SPECIAL
M 1
W
1
LIMITED
M 25
W 21
46

Appendix B - 4

Summer Quarter Enrollment and Attitude Determination

- Survey of Spring Quarter 1967 Students
- Survey of Summer Quarter 1968 Students (Preliminary Results)

SURVEY OF SPRING QUARTER 1967 STUDENTS

Table 1

Survey of spring quarter 1967 students, number and percentage distribution of responses stating intentions to attend the Berkeley summer quarter 1967 compared to actual number and percentage of students who continued their enrollment from spring to summer.

Stated Intention	SPRING QUARTER SURVEY								ACTUAL REGISTRATIONS								
	Number in Survey Sample				Percentage of Total in Survey Sample				Official Total Student Population Enrolled in Spring Quarter 1967			Number of Summer Quarter 1967 Students Who Were Enrolled in the Spring			Percentage Continuing From Spring to Summer		
	Total	Under-grad	Grad	Status[1] Un-known	Total	Under-grad	Grad	Status[1] Un-known	Total	Under-grad	Grad	Total	Under-grad	Grad	Total	Under-grad	Grad
Plan to attend summer school	7,318	3,837	2,907	574	30%	26%	35%	48%	25,482	15,853	9,629	7,142	4,286	2,856	28%	27%	30%
Do not plan to attend summer school	17,056	11,103	5,325	628	70%	74%	65%	52%	-	-	-	-	-	-	-	-	-
Total in survey	24,374	14,940	8,232	1,202	100%	100%	100%	100%	-	-	-	-	-	-	-	-	-

1-Status not indicated.

SURVEY OF SPRING QUARTER 1967 STUDENTS

Table 2

Survey of spring quarter 1967 students, number and percentage distribution of responses stating reasons for attending the Berkeley summer quarter 1967

Reasons for Attending Berkeley Summer Quarter	Number in Survey Sample				Percentage of Total in Survey			
	Total	Under-grad	Grad	Status Unknown	Total	Under-grad	Grad	Status Unknown
Accelerate progress toward a degree or certificate	4,770	2,456	1,842	472	65%	64%	63%	82%
In order to obtain degree or certificate by end of this summer	1,414	693	676	45	19%	18%	23%	8%
Fellowship, T.A., or Internship requirements	263	117	138	8	4%	3%	5%	1%
Make up units or maintain normal progress	166	143	10	13	2%	4%	a	2%
Fulfill major or university (breadth) requirements (thesis, orals, research)	157	72	81	4	2%	2%	3%	1%
Broaden academic background (additional courses)	132	82	43	7	2%	2%	2%	1%
To take off Fall Quarter 1967	80	55	22	3	1%	1%	1%	1%
To take off Winter Quarter 1968	56	36	7	13	1%	1%	a	2%
Courses offered only in summer	48	38	9	1	1%	1%	a	a
Miscellaneous	39	27	10	2	1%	a	a	1%
To take off Spring Quarter 1968	30	22	5	3	a	1%	a	1%
Lighten load	30	26	4	0	a	1%	a	0
No reason given	133	70	60	3	2%	2%	2%	1%
TOTAL	7,318	3,837	2,907	574	100%	100%	100%	100%

a-Less than 0.5%.

SURVEY OF SPRING QUARTER 1967 STUDENTS

Table 3

Survey of spring quarter 1967 students, number and percentage distribution of responses stating plans to attend one or more of the Berkeley summer quarters of 1967, 1968, 1969 and 1970.

Stated Intention	Number in Survey Sample				Percentage of Total in Survey			
	Summer Quarter				Summer Quarter			
	1967	1968	1969	1970	1967	1968	1969	1970
Plan to attend summer	7,318	3,673	1,386	484	30%	15%	6%	2%
Do not plan to attend summer	17,056	20,701	22,988	23,890	70%	85%	94%	98%
TOTAL IN SURVEY	24,374	24,374	24,374	24,374	100%	100%	100%	100%

SURVEY OF SPRING QUARTER 1967 STUDENTS

Table 4

Survey of spring quarter 1967 students, number and percentage distribution of responses stating reasons for attending the Berkeley summer quarter 1967 compared to number and percentage of students who are planning to attend future Berkeley summer quarters 1968-70.

Reason for Attending Summer Quarter in 1967	Number in Survey Sample	Stated Intentions to Attend Berkeley Summer Quarters 1968-70				Stated Intentions to Attend Berkeley Summer Quarters 1968-70 as a Percent of Total in Survey by Reason for Attending Sum Qtr 1967			
		Plan to Attend 1968	Plan to Attend 1969	Plan to Attend 1970	Do Not Plan To Attend 1968-70	Plan to Attend 1968	Plan to Attend 1969	Plan to Attend 1970	Do Not Plan To Attend 1968-70
Accelerate progress toward a degree or certificate	4,770	1,769	670	245	2,086	37%	14%	5%	44%
In order to obtain degree or certificate by end of this summer	1,414	72	23	8	1,311	5%	2%	1%	93%
Fellowship, T.A., or Internship requirements	263	71	21	5	166	27%	8%	2%	63%
Make up units or maintain normal progress	166	48	19	5	94	29%	11%	3%	57%
Fulfill major or university (breadth) requirements (thesis, orals, research)	157	33	9	4	111	21%	6%	3%	71%
Broaden academic background (additional courses)	132	35	10	2	85	27%	8%	2%	64%
To take off Fall Quarter 1967	80	25	8	2	45	31%	10%	3%	56%
To take off Winter Quarter 1968	56	16	10	4	26	29%	18%	7%	46%
Courses offered only in summer	48	7	3	1	37	15%	6%	2%	77%
Miscellaneous	39	3	0	0	36	8%	0	0	92%
To take off Spring Quarter 1968	30	9	4	0	17	30%	13%	0	56%
Lighten load	30	9	3	0	18	30%	10%	0	60%
No reason given	133	21	2	1	109	16%	2%	1%	82%
TOTAL	7,318	2,118	782	277	4,141				

ATTITUDINAL SURVEY OF SUMMER QUARTER 1968 STUDENTS
(Preliminary Results)

Virtually all undergraduates who responded to a question on degree plans indicated that they were currently working toward a bachelor's degree. Among graduate students, 42% were seeking master's degrees, 39% indicated the Ph. D. as their current objective, and another 10% were seeking either professional doctorates or certificates. In regard to their ultimate degree objective, about 30% of undergraduates eventually hope to earn a master's degree and 25% plan for a Ph. D.

With the exception of freshmen, it was students who had been enrolled at Berkeley from one to two years who showed the highest propensity to attend summer quarter. Among seniors and graduates, about 60% had been registered two years or longer, but sophomores and juniors, understandably, had shorter enrollment histories on the average. Considering specific patterns of past attendance, over 60% of undergraduates and about 80% of graduates indicated that they had attended either winter or spring quarter of 1968, and many probably attended both. Among undergraduates, the range of those who attended Winter Quarter 1968 ran from 27% for freshmen to 77% for seniors, and from 32% to 86% for these classes in regard to Spring Quarter 1968.

This, of course, raises the question of when these students decided to come to summer quarter. On the whole, Spring,1968 was the most important decision point, with about 40% of all students indicating that they decided at that time. This varied with class level, however, ranging from 53% for freshmen down to 30% for graduates. Interestingly, another 30% of graduate students said they made their plans to attend prior to Fall Quarter, 1967. Next in overall importance was Winter, 1968, since about one fourth of each class made up their minds then. Seniors and graduates planned farthest ahead, other students were more spontaneous. Between 10% and 15% of the freshman through junior classes decided to attend summer quarter within two weeks of registering, but only about 5% of seniors and graduates decided so late.

With respect to their future enrollment plans, a clear majority (73%) indicated that they would be enrolled in the Fall of 1968. When asked about quarters further in the future, students became less definite (5% did not answer the question concerning Winter 1969, and 7% ignored the question on Spring 1969), but 66% said they would attend Winter Quarter 1969 and 60% planned to attend in the Spring. The percentage of seniors planning to stay enrolled after Fall, 1968 dropped to 55% in Winter and 40% in Spring, presumably due to their anticipated graduation. Freshmen and juniors seem equally interested in the Winter and Spring Quarters of 1969 (about 80% of these classes plan to attend each quarter), but sophomores slightly less so. This can probably be explained by the higher representation of intercampus visitors at this class level. Graduate students, also probably anticipating graduation, gave 60% and 55% positive responses regarding winter and spring quarters respectively.

As was mentioned in Section II, 20% of the students who were enrolled this summer have proven their willingness to begin their Berkeley careers with a summer quarter by actually doing so. In order to test student opinion on this matter generally, students were asked if they would have made their initial enrollment at Berkeley in a summer quarter if that were a precondition of their being admitted. Interestingly, 70% said yes and only 3% said they would have gone elsewhere. This suggests that the notion of going to school in the summer is far from repellent to these students, and in fact 55% of them had enrolled for college-level work in one or more previous summers. Incidence of previous summer study was higher among graduates (67%), but was by no means insignificant among undergraduates (45%). When asked about future summers, however, a majority of students chose not to reply. Only 10% had any plans for the summer of 1970 or beyond, but 40% indicated that they planned some form of summer study in 1969. Of these, well over nine out of ten, or 35% of the students in the sample group, expect to return to Berkeley. If these plans materialize, this compares quite favorably with the 22% carry-over between Berkeley's first Summer Quarter in 1967 and the 1968 Summer Quarter just completed.*

Although students have to go through the normal admissions process to enter in the summer, 10% indicated that they were attending Berkeley for the summer quarter only. Intercampus visitors would account for about two-fifths of these students, but the majority have gone to the trouble of applying solely for the purpose of attending in the summer. In this respect, sophomores were the most mobile; 19% came for summer quarter only, while less than 10% of the other classes did so. If summer quarter were as informal as the old summer session there would probably be a greater influx of special, summer-only students, but on the whole, students seem to give less emphasis to the difference between summer quarters and summer sessions than to the differences between Berkeley and other institutions. Over 60% of the students claimed to prefer summer quarter (30% would have preferred a summer session), but only 30% would have gone elsewhere to attend a summer quarter had Berkeley not offered one. About 5% had either no opinion on this or did not respond, but 65% said they would have attended Berkeley regardless.

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*Other than their gross number, not much is known at this time about the students who attended both summer quarters. When the full report on Summer Quarter, 1968 is published, however, it will include additional information about this group of "repeaters."

One aspect of summer study which may become quite significant is the effect it has on the student's opportunity for gainful employment. Several questions were devoted to the topic of student employment, their primary intent being to explore differences between patterns of employment in Summer, 1967 and Summer, 1968. In the earlier year 58% of the sample group worked, but only 35% of the students said that they worked during the Summer of 1968. There was no apparent change in the average number of weeks worked, but in 1967, 62% of working students put in 31 or more hours per week while only 20% of working students devoted that much time to their jobs in 1968. In fact, nearly one half of those who worked in 1968 spent less than 20 hours per week on the job. Obviously this reduction in hours also reduced student earnings; in 1967 most students who worked earned more than $40 per week, but a majority earned less than that in 1968. Since many Berkeley students rely on their own earnings to meet part or all of their educational expenses*, the number of students who can afford to attend multiple summer quarters may, in the long run, be limited by financial considerations.

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*Student Financial Support at Berkeley, Office of Institutional Research, Berkeley, California, February, 1968

REASONS FOR ATTENDANCE

Since Summer Quarter, 1968 was only the second summer for Berkeley under the new quarter system, initiated in Fall, 1966, the reasons students chose to enroll in the summer term were considered to be important aspects of the survey. Although the same questions regarding reasons for attendance could be asked of students in any other quarter of the year, the special significance of the new summer program as a fully integrated part of the operation of the University gave the reasons for summer work unusual interest.

The surveyed students were asked to indicate the degree of importance they would attach to twenty-three probable reasons for summer work: very important, moderately important, of little importance and not applicable.

Almost one-quarter of both seniors and graduate students went to the summer to obtain a degree or certificate by the end of that term. Similarly, an increasing proportion of each class, from freshmen to graduate, considered the summer an appropriate time to accelerate their progress toward their degree: 19%, 28%, 49%, 58%, 59%, (very important); and 42%, 59%, 72%, 72%, 73% considered this reason either very or moderately important, respectively by class.

Freshmen and sophomores, compared to the other students, attached greater importance to the opportunity to enroll in courses which were less crowded in the summer than in other quarters; however, only about 10% of these lower division students thought this was a very important reason, while about 30% thought it was moderately important.

Very few students went to the summer quarter to work with or take courses from a particular faculty member; nevertheless, between 40% and 50% of the students (except freshmen) gave some importance to using the summer to deepen their preparation in their major field. Also, again excepting freshmen, between 30% and 40% regarded the summer as an important time to fulfill major or institutional (breadth) requirements, including work for theses, orals and research. In this same general area of reasons for summer quarter attendance, a substanial proportion of the students indicated that they attended Berkeley in the summer to broaden their academic background through additional course work -- between 26% and 41%.

Two other academic reasons for enrolling in summer courses were relatively important to undergraduate students but less important to graduate students. Between 16% and 40% of the undergraduates gave some importance (very or moderately) to using the summer as a period in which they could improve their grade-point average and make up units. Sophomore students were at the high end of this range. A third academic reason, not noted previously, was regarded as important by over half of the sophomores and juniors (53% and 55%) and by over two-thirds of the other students, including graduate students. This reason was the desire on the part of the students to maintain normal progress in whatever academic program they were pursuing at the University. Students were also asked whether they enrolled during the summer because a course (or courses) they needed or wanted was offered only in the summer. This was not important to 90% of the students.

Among the list of reasons reviewed by the students in the survey were six reasons which referred to possible special needs of the students: housing, scholarship and maintenance of draft deferment status, public school teacher credits for higher salary compensation, insurance of admission into the Fall Quarter, 1968 and fellowship, teaching assistantship or internship requirements. For the most part, none of these reasons were important to 90% or more of the undergraduates except for the reason to insure a place at Berkeley in the fall term. Almost half of the freshmen considered summer registration as insurance for fall admission an important reason for being at Berkeley; almost one-fifth of the sophomores and juniors indicated this reason had some importance to them, also. (The reader should note here that this reason has meaning only to students newly admitted to Berkeley; the final report will separate the new students' answers to this question.) Among the graduate students, 20% stated that summer work was necessary to meet requirements for scholarship aid, fellowships, teaching assistantships and internships. The other four special reasons noted above were unimportant to graduate students.

There are two reasons for summer enrollment which described anticipatory behavior among the students. One reason states that the student has gone to the summer in order to take off a quarter in the coming academic year. The other states that summer work allows the student to lighten his load in succeeding quarters. About one-fifth of the undergraduates, excluding seniors, gave some importance to using the summer in order to take off another quarter. Seniors and graduate students gave less importance to this reason, about 10%.

STUDENT REACTIONS

As noted in the introduction, the returns on the questionnaires from students who were sampled seemed extraordinarily high when judged by most mail surveys. Perhaps the covering letter which went with the questionnaire form had some affect on this high response (see page 119). In this letter emphasis is given to our interest in obtaining student opinions concerning summer quarter operation and their particular needs with regard to courses of study. We were gratified by the fact that about six out of ten of the students took the opportunity to express their reactions to the summer quarter as it compares with other quarters in terms of instruction, facilities, services, extracurricular activities, etc. These responses were open-ended and in a few instances this question elicited relatively lengthy comments.

Within the time constraints of producing this preliminary report a completely satisfactory analysis of these open-ended responses is not possible; nevertheless, a fairly detailed tabulation has been made and the general nature of student responses is quite clear. As noted above, about 600 of the students in the sample of 1,400 either did not give any response to the question of comparability of summer quarter with other quarters or they stated that they had no opinion or they said it was the same as other quarters. Among these students who had neither favorable nor unfavorable remarks were several who indicated that they had no previous experience with the quarter system and, therefore, would not make an evaluation. With minor exceptions, the favorable respones can be grouped into three broad areas of opinion: 1) Summer offers a more relaxed environment where the pace is less hectic, the faculty and students are more casual and the competition is less intense; 2) The campus generally is less crowded with students and staff, facilities are more readily available and classes are smaller; 3) Summer allows opportunities for better student-teacher relationships, provides for more individual attention and offers better instruction particularly through the use of visiting professors who bring fresh viewpoints to the program. The first two responses were made by about 150 students each, and the third by about 75.

Two other favorable responses which were indicated by fewer than 15 students, each, were appreciation of an opportunity to accelerate work toward the degree and preference for the summer quarter program over the summer session program. A handful of students gave a rather interesting positive reason for preferring summer work -- they said that the absence of their faculty adviser gave them an opportunity to choose freely from the course offerings.

Negative responses were not necessarily more numerous when measured by individuals but they were definitely greater in number when multiple negative responses given by many students are counted separately. Also, the unfavorable responses were more specific and, as one might expect, more intense in tone in several instances.

Before going on, there are two critical points the reader should consider regarding the negative comments. First, the majority of the summer quarter students (represented by the sample) considered the summer either equal to other quarters, had a favorable opinion of it compared to other quarters, or found no reason to acclaim or complain. The second point is that if these unfavorable opinions are held by an equivalent proportion in the total summer quarter population then serious consideration by the faculty and administration should be given to correcting summer quarter deficiencies.

As with the positive opinions, the negative ones could be grouped into a few areas of major importance. By far the largest single negative response (around 200) was that course offeringswere entirely too few in number. Responses included comments on all three levels of instruction, lower, upper, and graduate. Students complained, sometimes bitterly, with regard to course conflicts and cancelled courses which forced them to take heavier loads in the fall or postponed their graduation date.

About a hundred students were very disappointed with a perceived reduction in the availability of campus facilities. The main complaint was with the earlier closing hour of the library. They also felt deprived of adequate time for study, study space, and were in some instances dissatisfied with the hours maintained by the Student Union facility.

The quality of instruction in the summer quarter was considered by about 75 students to be poorer than in other quarters. Many of these students specifically stated that the visiting faculty from whom they took courses were inadequate teachers. Along the same lines, but for a different reason, about

50 students were unhappy with the absence of regular faculty members. These students noted either that the absence of their adviser created problems, such as delays in their programs, or that the absence of the regular faculty reduced the effectiveness of the instructional program.

Although a greater number of students appeared to approve of the more relaxed, less hectic summer environment, over 50 students were disappointed with the limited social, athletic and other extracurricular activities.

The other unfavorable comparisons, or simply negative reactions which carried no comparative implication, were diverse in content and received fewer than 25 tallies each. Examples are: lack of enthusiasm among both teachers and students; the summer is not conducive to good study habits; the entire quarter system including the summer quarter is detrimental to academic performance; there are too many non-students on campus; students should be allowed to enroll for fewer units in the summer; preference for summer sessions; the Daily Californian should maintain a daily schedule in the summer; etc.

The questionnaire also asked students to indicate whether they were able to take the courses they wanted or needed during the summer quarter. Almost 300, among the 1,400 students in the sample, stated that they were not able to satisfy all of their needs inasmuch as some courses were not offered, some courses had more student demand than could be accommodated and some courses were given at times which conflicted with the students' other course needs.

There is little doubt that a similar question posed to students enrolled in other quarters of the year would yield similar responses of conflict and enrollment capacity and, perhaps, even inadequate course selection; nevertheless, the large number of students who complained about the meager course selection, as described in preceding paragraphs attests to a probable real need for expanding the summer offerings.

An individual count of specific courses listed by the students as those courses they were unable to take but desired to do so, shows that the students listed about two courses each. Almost 6 out of 10 of the problems noted by the students were courses not given by the department of instruction, about 3 out of 10 courses had a scheduling conflict and 1 out of 10 courses had a demand in excess of capacity. The remaining tenth included a variety of miscellaneous problems. It is worth emphasizing here that the majority of the students in the sample, 1,100 out of 1,400, did not indicate any course selection problems.

August 1, 1968

Dear Student:

The enclosed questionnaire has been sent to a sample of about one-fourth of the students enrolled this summer at Berkeley. Its purpose is to evaluate the summer quarter from a student viewpoint, in both quantitative and qualitative terms.

This is Berkeley's second summer quarter, and year-round campus operation has existed for only two years. Two semesters and a summer session have been replaced by the quarter system. It is important that your own opinions concerning the operation of the summer quarter, along with information on your use of summer offerings, be known to administrators, faculty, and other students. Specific answers related to your course needs and wants may substantially affect future programming for the campus.

This questionnaire is simple and straight-forward, and we hope we have distributed it at a time when examination and term paper pressures are at a minimum for most students. A stamped self-addressed envelope is enclosed for easy mailing of the completed questionnaire. We would appreciate your assistance in making this evaluation.

Sincerely,

Sidney Suslow
Director